

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE (WITH SUPPLEMENT) 6d.]

PRACTICABILITY OF WORKING GOLD QUARTZ IN WALES REMUNERATIVELY.

Call all this "sportiveness," if you will, but where is the lead-line that can now fathom the depth of its consequent ramifications, if suffered to go recklessly on? or where the man honestly bold enough to stem the forceful, if not destructive, current of such a stream of incongruities? Honourable names avail nothing here, and most noble ones are of like value; for plain facts are superior to either of them. The mathematical axiom may convey a salutary lesson, as we read in it—"If equals be added to unequals, the whole is unequal."

W. E. GILL.

Traverse, Dayton.

"P.S. I dare say you will find something in your by-laws and regulations relative to public companies that will meet the exigencies of the case."

SIR.—Observing in the *Morning Journal* of last week a notice of a gas tube, which has been patented by Mr. Ashdown, of Epsom, I beg to call your attention to the fact, that some two or three years ago a similar plan was registered under the name of Mr. Goddard, of Ipswich, the agents in London being Messrs. Burt and Co. of Fleet-street, in whose window for some months a small notice was placed of a gas tube, sent so as to form a series of bars, pipes, &c. &c. for the purpose of gas, rising from the street, and covering the road with a gas asbestine—this is precisely similar to the one described by you in last week's *Journal*.
 As Goddard,
 Farringdon-street, May 3.

RAILWAY ACCIDENTS.

—You will oblige by inserting the accompanying article in your next Journal. The purpose of calling attention to the subject. In a week or so I shall also send the particulars of a petition which has been drawn up and signed by the principal engineers of this town, with a view to getting the principle adopted. *Southampton, May 3.* EDWARD PALMER.

TO THE OFFICERS IN COMMAND OF HER MAJESTY'S FORCES.
The success of an engagement must greatly depend on the speed and safety with which the troops can be transferred from place to place. I beg to submit for your consideration the particulars of Palmer's invention for facilitating speed and safety in railway travelling, trusting that the importance of the subject will secure your interest, so far as may be with the Board of Trade, in hastening them to get these arrangements adopted.

Large locomotive bodies, excepting railway companies, provide against accident; in case of danger, no vessel leaves a port without a certain number of boats as a provision should be made respecting railways, since the great speed at which they travel, and the many contingencies to which they are liable, render the arrangements quite insufficient to ensure the safety of the public in the event of an accident.

The invention consists in the application of a pair of wide rollers, with a deep groove in each end of the engine, and which are never in use excepting in case of accident, to a wheel or tyre, or a run off the line of the usual wheels, when the roller is immediately brought upon the rails, keeping the engine and train on the line, and they would otherwise be off; the expense is only 40l. Also a self-acting brake to run at the end of a train, which has merely a little extra timber, so placed as to conduct the force of collision from an up-coming engine and train to the rails. The invention has passed all examination by the most scientific men of the day—of which I have been received at the Society of Arts, Adelphi, Strand; also at Royal Polytechnic Institution, Regent-street. *London-green, Essex, May 2.*

LLANELLY AND LLANDILO RAILWAY.

—My attention has been directed to an article in the *Companion* of the 14th of May, under the above head; but as it does not correctly describe the points upon which the directors and traders are at issue, I should feel obliged if you would insert the next number of the *Mining Journal* the following extract from a letter in the following week.

THE article referred to states that the traders on the line, to claim a "prescription" to continue at the old rates of tolls—such a claim, if made, would be simply null and void. The case stands thus:—Last year, the Railway Company were going to Parliament for a continuation of their line to Llandilo, and in doing so, took occasion to alter and rescind various clauses in their original Acts, in their third bill a maximum toll of 5d. per ton on coal or culm; against this the traders entered an opposition. After interviews with the directors, it was agreed that the opposition should be withdrawn, the directors stating that no increase of tolls would be made for two years; and a minute to this effect was forwarded to the traders, omitting, however, the time. The tolls were then 1½d. per ton, less 10 per cent. (there are few higher). In the face of this understanding, the nine months elapsed before notice is given that the 10 per cent. will be put on, the waggoners required to be taken at a rent. The waggoners carry 3 tons, generally, and were valued to the late contractors at 14l. each. The rent demanded was 7l. annually, or 43 per cent. on their value. This was afterwards reduced to 5l. 10s. per wagon, or 35 per cent. To this modest demand the traders naturally demurred, and claimed, of what clearly appeared to them, a breach of engagement. The committee of the Llandilo Railway Board, however, being of the *non est* description, proposed to the traders, the traders found no response to their appeal, and the board, concluding them to be driven into a corner, have adopted the "stand and deliver" style which their article refers to—a style, more suitable to the heroes of Finsbury Common than to gentlemen acting under the polite and conciliatory influence, which to the benefit of the shareholders, the mine owners, and the public, no man should neglect the public, the trade, and the port, with its many and important interests, by this ill-considered step; but the traders protest against any share being taken thereby being laid at their doors. They have the strongest grounds for complaining that faith has not been kept with them, but, notwithstanding, are ready and willing to meet the company on terms which, having been submitted to in long and practically conversant with these matters, have been characterised as exceedingly liberal and handsome. That their present course will even drive the colliery owners of the Amman Valley to Swansea, there can be no doubt; the latter are ready to build with open arms any one who will take the tolls, and once there, the "voice of the charmer," be he present or any other chairman, will not bring them back to his tender mercies. *Bio Vale.*

(ADVERTISEMENT.)

WHEEL ZION, AND ITS MANAGEMENT.

—In your Journal of the 29th April there appeared a letter, signed H. C. Vivian, in which was evidently intended to injure my reputation. On those grounds for a small space in the columns of your most valuable Journal, for the purpose of publicity to what Mr. Vivian calls some of his most honourable and straightforward transactions. Why does Mr. H. C. Vivian, in summing up the expenditure, say that the public had been paid to him? He also forgets to mention the level that has been driven since he left, the erection of the capstan and shears, with ropes; but, strange to say, he has erred quite on the other side, in calculating the cost of his superintendence, and over-rated to a very great extent. With regard to scores of pounds being wasted under the present management in injudicious underground and surface work, and unnecessary buildings, I am open for the opinion of any two practical agents to decide whether it is under the present or former management. In reference to unnecessary buildings, he certainly must have been guilty when he was to build the engine-house in one field, the office, the windmill, and the smithy's shop in the third. I am not at all surprised that he is very anxious to be reinstated as pursuer (which he cannot deny, as it is not since he came to me on the mine, and said: "It is all right, I have obtained the property," when we find that his salary was not only, as he terms it, a paltry four shillings per month, but with one thing and the other it amounted to nine or ten shillings per month, as the cost-book will prove. Mr. Vivian boasts of his father having hundreds of pounds of expenses, but he must recollect that he had first obtained the shares at 7½ per share, and represented the course of ore to be 1½ ft. wide, worth 12l. per ton, having in his possession at the same time the assayer's report, which proved it to be not worth 2l. per ton. Is this a fraud, or a wilful misstatement? If Mr. Vivian doubts the veracity of it, I am prepared to show a plainer demonstration of the fact. He may rest assured that if he has the wish I have the way, surely, enough has now been exposed to corroborate the propriety of Mr. Peet's remark—viz., former experience has given a painful and costly lesson as to his management. It is thus plainly shown that Mr. Vivian's challenge of defying any man to prove that he has wronged the company of a shilling is accepted, and solved in a manner that cannot fail to give satisfaction to his opponents, and disgrace to his manager. To prove the incredibility of Mr. Vivian's statement, I subjoin a list of our stations underground for the last 12 months:—The engine-shaft sunk 20 fathoms, shaft 34 fms., the 30 fms. level driven east and west 71 fms., the 40 fms. level driven east and west 75 fms., the 40 cross-cut driven south 32 fms. 3 ft., the 40 fms. level 11 fms., the 50 cross-cut 7 fms., the 50 fms. level east and west 12 fms., making a total of 299 fms. 3 ft. instead of, as Mr. Vivian says, 46 fms. This is another proof of what he says, and should not have troubled him to write, if he had been drawn into it by Mr. H. C. Vivian, as I would much rather dig than write; I fear that silence on my part might be viewed as a proof of guilt or indifference; I beg further to state, so unconscious have I been of any aim but that of generally serving my employers, that I wonder what could lead Mr. Vivian to make such a statement as what has been done. I need only say, as I have before said, let the shareholders of the mine send whom they please to examine and inspect the management of the mine; I am willing to stand or fall by the results of such examination. *Wheal Zion, May 3.* JAMES BRAY.

(ADVERTISEMENT.)

WHEEL ZION, AND ITS MANAGEMENT.

—In your valuable Journal of last week, I observe a letter signed H. C. Vivian, which is a very grave and serious charge against the present management of the mine. I actually found guilty of having a share in the Tamar Iron-works! And bills on the said Tamar Iron-works are actually found charged in the cost-book of the mine. The simple statement of the case is this:—On my part at Wheal Zion some time since, I found the shaftmen had been delayed some time for the want of a few pumps, and other necessary pitwork, which had been previously ordered of Messrs. J. E. Mare and Co., of Plymouth. Capt. Jas. Bray, the instigation, and of course consent, of a member of the committee (Mr. F. Peet), ordered that, as the foreman informs me, rather as obliging, and contrary to a favour on Captain Bray (the founders being made aware that the materials were very much wanted at the mine), rather than the order being solely for the quantity of work then on hand at the foundry. However, it appears that there was no overcharge, as doubtless Mr. Vivian would have named it. Mr. H. C. Vivian says, "A man who is a merchant, and supplies the mine with materials, is thereby inadmissible as the company's agent." The worthy gentleman was undoubtedly strongly impressed with this idea when he charged his own work in the name of Wm. Guest (a labourer in the mine). This champion for company's right condemns the present agent, and deems him inadmissible as such, on the ground of his holding a share in an iron foundry, but thought it perfectly consistent in himself to do the horse-work for the company, and charge it in another name. Mr. H. C. Vivian, in his letter, acknowledges the horse to have been his own. Then why does he for several months charge the work in the name of Wm. Guest? And on his selling the animal to the company (a short time previous to his leaving the office of pursuer of this mine), why does he charge the amount in his own name? Mr. Vivian quite forgets that, during the time of his pursuership, the name of the horse was of frequent occurrence in the cost-book, as having supplied with such articles of merchandise as these—viz., powder, fuse, candles, and, almost all other descriptions of mining material! Mr. Vivian says in reference to Mr. Peet, in his letter of last week, are any of his own before attempting to remove the note from those of his pursuers? Mr. Vivian may rely that the orders received at the Tamar Iron-works, in the name of Wm. Guest, are a matter of no consideration to the proprietors of the mine, but the pursuer, who never informed Mr. Vivian that he was the principal proprietor—indeed, he could not have done so without committing one of those egregious mistakes, the like of which Mr. H. C. Vivian is frequently the habit of doing.

Mr. Vivian, in rather angry terms, expresses the indignation his father evinces at his management, and conservation, exhibited in the conduct of the mine with such articles of merchandise as these—viz., powder, fuse, candles, and, almost all other descriptions of mining material! Mr. Vivian says in reference to Mr. Peet, in his letter of last week, are any of his own before attempting to remove the note from those of his pursuers? Mr. Vivian may rely that the orders received at the Tamar Iron-works, in the name of Wm. Guest, are a matter of no consideration to the proprietors of the mine, but the pursuer, who never informed Mr. Vivian that he was the principal proprietor—indeed, he could not have done so without committing one of those egregious mistakes, the like of which Mr. H. C. Vivian is frequently the habit of doing.

307 fathoms, again intersecting the lode about 5 fathoms west of the first point of intersection? This bit of good management entailed a loss on the adventurers of about 1000l., exclusive of the delay consequent thereon! Many other instances, such as the foregoing, may be adduced; but these are considered sufficient. Mr. Vivian says, "The time when Mr. H. C. Vivian and his father had the management of the mine, was among the mining community of the Tavistock district, recognised as a by-word for mismanagement, extravagance, and other as equally unpleasant epithets. As I shall not respond to anything further on this subject (and I should not have addressed you the foregoing had not my name been most unwarrantably assailed by Mr. Vivian, as also for the purpose of bringing the truth to light), Mr. Vivian need not trouble himself, or the public, with anything further relative to the affair. *Wheal Zion, May 3.* JOHN SINN.

(ADVERTISEMENT.)

THE COOSHEEN MINE.

Sir,—I have just seen in your Journal of the 29th a letter from Capt. Skinning, in which he is acquainted with his production relative to Coosheen Mine, that I nearly fainted three times, and the idea of rushing into print frightened me entirely. I cannot, however, help saying a word or two in reply to Capt. Skinning's elaborate production. I. If he has an original idea, I shall be glad to hear and profit by it. II. When he knows grey ore underground from powder smoke, I shall be glad to see him. III. When he knows the difference between oxide of iron and black oxide of copper, I shall be glad to talk to him. IV. The agent in Coosheen will judge, and is, no doubt, competent to form a correct opinion (I never saw him), whether the mine has been properly worked, and what the "tickling lists" will prove during the last 12 months. In conclusion, I may be allowed to observe that "old practitioners" have generally a large number of gullible patients. I have now done with Captain Skinning, and shall take no further notice, "old practitioners" as he is, of his remarks. *Kennare, May 1.* W. THOMAS.

SITHNEY WHEEL BULLER.

Sir,—I am compelled to resume my pen, after almost unexampled patience and long suffering, to ask some of your numerous readers to answer the following questions: 1. Why are our meetings to be adjourned from fortnight to fortnight, without any accounts ever being produced? 2. How is it that the auditors, appointed six weeks ago for the very purpose of auditing them, cannot undertake the responsibility of passing them? 3. How is it that, instead of the promised dividends, we cannot raise 1 ton of tin in three months' working? 4. Is it true that there are proceedings pending against the materials on the mine in our local Stannaries Court? 5. Why are the merchants paid by bills, without provision being made to meet them at the general meetings? 6. Why are the most important affairs of the mines kept back from the knowledge of the shareholders at the meetings? 7. Why is it that, with liabilities steadily increasing, no calls are made to clear them off? A COUNTRY SHAREHOLDER.

DEVON UNITED MINES.

Sir,—At the last meeting, the committee of this mine (five in number) were voted half a guinea each per month for their attendance. As an old miner, this is the first instance that I know of, where such a done, excepting, of course, in mines where dividends are made, and then, probably, fairly so. I hope at the next meeting the shareholders, to a man, will meet, and enter a protest against such an unfair application of the unfortunate shareholders' money. At the meeting on the 21st of April last, a call of 2s. 6d. per share was made, and the mine 328l. 9s. 6d. in debt; and yet, forsooth, these monthly half-guinea committees allowed such a proposition to be put to the meeting and carried; but surely they do not mean to accept it, and make the concern worse than it is. The report of the mine does not justify such an expenditure, which has the statement sent forth from Threddeville-street proved true as to selling 500 tons of valuable muddle, "mightily impregnated" with "gold," and of which there were thousands of tons to be sold by public ticketing; "This will," it goes on to state, "enable us to pay a profit at once." Read the report of the 18th of January, and the statement inserted in the *Mining Journal* of the 21st of January, and then, I hope, the shareholders will judge for themselves, and attend the next meeting. *May 3.* A. C. D., M.D.

THE TINCROFT MINE—CORNISH COMMITTEE.

Sir,—Finding that a meeting of the Tincroft Mining adventurers will be held next week, as a shareholder, and an old practical miner, I would suggest to that meeting the propriety of having a Cornish committee, to call in all merchants' bills, make out a quarterly account, and have the actual loss or profit prepared, and to suggest to the London management any alteration they would recommend; and to publish their quarterly account and report regularly in the *Mining Journal*. No merchant should be on the committee, nor any merchant who did not send in his bill before the said committee met should receive another order for materials for six months. The agents should state to the committee what they considered would be requisite for the next three months. In an establishment of such magnitude these yearly meetings are not enough to satisfy the shareholders or the public; therefore, I call on my brother shareholders to give my suggestions their best consideration. *St. Austell, May 3.* A CORNISH SHAREHOLDER.

WHEEL FORTUNE (SOUTH TAWTON)—IVY TOR CONSOLS.

Sir,—Having occasion to travel from Exeter to Okehampton yesterday, I availed myself of the opportunity to visit this mine. On arriving, the first thing that attracted my attention was a notice of the forfeiture of the set by the company posted on the counting-house, and other doors, by the lessors. Proceeding to the engine-shaft, I was met by a very intelligent young man, who very civilly informed me that I was a trespasser; but, on giving my name, &c., kindly admitted and showed me all the surface works, and explained the nature and extent of the underground operations. That it is a valuable property all practical miners and people of the neighbourhood admit, and respecting which there can be but one opinion. But how the shareholders should be so blind to their own interests as to have sacrificed it for the sake of a few pounds, which has kept the stipulated number of men employed upon the mine, after having done so much, and driven their deep levels so near towards intersecting the large lode, is as astonishing as it must have been imprudent. I am informed that a local company, with whom are associated some good names, are about to resuscitate the mine, and from which important results may be anticipated. Resuming my journey, I soon arrived at Ivy Tor Consols, in which has recently been cut a lode carrying a leader of 14 in. of fine copper; altogether opening out a first-rate mine; in fact, this locality bids fair to become one of the best mining districts in the two counties; and these two mines are said to have the same lodes. *Okehampton, May 4.* A NATIVE OF CORNWALL.

SORTHIDGE CONSOLS.

Sir,—Being connected with some mines in this locality, I had business which called my attention to the copper ore quays at Morwellham, near Tavistock. In looking at the various piles of ore there sampling, I am glad to inform you, and the fortunate adventurers in Sorthridge Consols, I found they had several piles of rich ore, amounting in the whole to 75 tons of dry ore; in looking over the pile it had a very unusual appearance, much resembling the ore formerly sold by the Bedford United. Knowing something about quality, I had a shovel brought, and bruised a small quantity, and when I found the sample to be of first-rate quality. Feeling some interest in this new undertaking, I had it tried by an assayer, and found it to produce 14½ per cent. for clear copper the whole pile, which will give the adventurers something like 850l. profit on the expenses of raising and dressing, the whole being broken down by hand labour. I have since visited the mine, and have been underground and inspected the workings, which I am much pleased with; they have a splendid course of ore, which will turn out 6 tons of rich ore per fathom, worth about 15l. per ton; this is in the 17 fms. level. The set is extensive, and I have never seen in any young mine the prospects they have here of being a good, lasting, and paying mine. *Morwellham Quay, May 3.* A MINER.

WEST WHEEL JANE, AND KEA TREMAYNE MINES.

Sir,—In your most influential Journal, of the 22d April, is a letter from "A Subscriber," dated Oxford, which I should have noticed in your last week's impression, had I thought the writer really desirous of eliciting information. My opinion still is, that such was not his object; but that he rather intended to throw discredit upon the manner in which my duties, as secretary, have been performed; and, in addition, from some sinister motive or other, best known to himself, to depreciate the property in question. Now, Sir, if this disinterested gentleman had written me upon the subject, I would, most willingly, have furnished him with any information he required. In stating thus much I do not deny the unquestionable right of a shareholder to make his grievances known through the public press, but before he ventures to take so hazardous a step, he should endeavour to restrain his impetuosity, and show some little regard for the position of others as well as himself. The attempt, however, of this unhappy shareholder to reflect upon my reputation does not, I assure him, at all concern either me or the gentlemen with whom I have the honour to be associated in the management of these mines. With regard to the expenses of the office, although they are not detailed in the balance-sheet, I beg to state that they are included in the mine costs, and not, as he would ask, in the payment on account of the engine. The accounts as produced in your Journal of the 13th April, were examined by a committee of competent and highly-respectable gentlemen. In some instances I am aware that it is usual to show the office expenses and secretary's salary, but in a vast number of mines it is not so. Although these charges, however, do not appear in the balance-sheet, which has given your correspondent so much uneasiness, he may rest assured that they have been duly paid, and that I have the satisfaction of knowing it. With regard to the incredibility of your correspondent respecting the "awful muddle," I can only express my regret that he has not more confidence in such authorities as Professors Ansted and Campbell, and beg to refer him to their reports of January last, which every shareholder was furnished.

In conclusion, I would add that the complainant may be perfectly satisfied that he is in good hands, which I hope will afford him some consolation. If you will do me the favour to communicate this information to him through the columns of your valuable Journal, I shall feel much indebted to you for the obligation.

38, King William-street, City, May 5. W. B. BAKER, Sec.

MINING IN SOUTH DEVON.—A prospectus has just been circulated of a company formed for working copper and silver-lead lodes, in a set on the borders of the River Erme, 1½ mile south-west of Ivybridge Station, on the South Devon Railway, under the title of the Caton Copper and Silver-Lead Mining Company, bounded on the east by the Ivybridge Silver-Lead Mine, which, in geological character, it is said much to resemble. By it we are informed that the strata are principally clay-slate, encompassing the southern portion of the Dartmoor granite, and intersected by greenstone and felsitic trappeous rocks; and further south becomes more arenaceous, with limestone and greenstone of vesicular character. Five lodes have already been discovered in driving an adit 41 fms. on a cross-course, containing at the intersections very fine silver-lead ore. Three of the lodes are lead lodes, and two of them copper, containing good stones of yellow ore. A shaft is sunk 10 fms. below the adit, to take the junction of the first lode with the cross-course, and is very promising. Large blocks of lead having been found in the stream at the north boundary of the set, search was made, and a sixth lode was discovered, which, for size and quality of the course of ore, is scarcely to be surpassed. The River Erme, where it bounds the set, has a fall of about 40 ft., on which water-wheels may be erected of sufficient power to carry the mine down to a considerable depth. The set is one mile square, held for a term of 21 years, at 15th days, and is divided into 10,000 shares of 1l. each. Capt. John Clemon and Thomas Rowlandson have inspected and reported on this property, which they consider of the most promising character, and with the several advantages which the site presents, and the more than ordinary favourable surface indications of metallic mineral, they consider, with efficient management, the operations will be highly remunerative.

Meetings of Mining Companies.

DEVONSHIRE GREAT CONSOLIDATED COPPER MINING COMPANY.

At the tenth annual general meeting of shareholders, held at the office, Barge-yard Chambers, Bucklersbury, on Monday, Mr. W. A. THOMAS in the chair.

The following report of the directors was read:—The directors of the Devonshire Great Consolidated Copper Mining Company have the satisfaction of submitting to the shareholders at this their tenth annual meeting a balance-sheet showing a division of profits the largest, with one exception, since the formation of the company. The amount of ore which has been sold is necessarily a grand element of success; at the same time it will be found, on a more minute examination of the accounts, that the completion of the permanent works and advance in the standard of copper have mainly contributed to this satisfactory result, notwithstanding the average price of copper in the ore has been less, arising from the introduction of poorer ore, which would not have been remunerative at a lower standard. The high price of timber and iron has caused an increased expenditure in these articles of large consumption. There is little to notice in the other items of annual occurrence, being chiefly dependent and assessed on the amount of profits.

Mr. Morris is now in occupation of the house built by the company for the resident director; it was found impossible to keep the cost within the sum voted for the building, and there is still a small sum due to Messrs. Harvey for unforeseen extras, found absolutely necessary in the progress and completion of the works. The Tamar Fishery continues to be a debit. The increasing mining operations near the banks of the river cause the directors to despair of any improvement; nevertheless, any question of damages which might arise therefrom is set at rest by the company holding it in their own possession.

The directors recommend the continuance of the grant for the education of the children of the miners. The sum voted at the last annual meeting has been distributed by Mr. Morris, to the satisfaction of the recipients.

In Part II, the assets of the company at the mines are somewhat increased, as must necessarily be the case in the extension of the works; and the items of stores appear larger, both on account of an increase of the stock, and the high price of articles. The valuation of the house is taken at the sum appropriated for its construction. There are no liabilities except those immediately in course of payment.

Considerable difficulty has latterly been experienced through the scarcity and unsteadiness of the labourers; many of the most efficient miners have left the country, and the agents have been compelled to employ casual and less experienced hands, to the detriment of the general progress of the mines. Moreover, this difficulty is considerably increased by the inability to provide houses near the mines for steady men with families, for it is obvious, now employment is so easily obtained, men will go where they can find the easiest work and best accommodation. The directors regret to be obliged to state that, notwithstanding they were led to believe cottages would be erected for the miners so soon as the works on hand were completed, no such opportunity has yet been found since the erection of twenty some time since; under these circumstances it is proposed to abandon the less profitable and merely experimental operations, and devote the entire disposable force to the development of the more essential parts of the mines.

The large returns of the poorer ores have increased the quantity of halvans so much that little impression has been made on the heaps already accumulated on the mines, notwithstanding the powerful machinery erected for the purpose has been in full operation. It is proposed to erect a double grinding steam-engine on the heap, so as to return them while the price for the ore is remunerative. This engine, with one for drawing at Agnes' shaft, is all the permanent machinery contemplated for the present. The great plunger lift, completed two years ago, has been invaluable, as without it it would have been impossible to have realised such profits, or return such quantities of ore. The foundry has proved so useful that the quantity of ore has been considerably enlarged, and is now capable of commanding the whole of this department, and is calculated to have been a saving to the company of at least 1500l. during the past year. The saw-mill is also in operation, and fully answers its purpose.

Capt. James Richards has, as usual, drawn up a report on the mines. It is gratifying to perceive the stock of ore ground has again increased. Notwithstanding the large returns, the reserves amount to 72,490 tons, or upwards of 4500 tons more than last year, affording an abundant supply for the future. The directors whose services terminate this day beg to offer themselves for re-election. The appointment of auditors is left with the shareholders, as usual.

Part I.—Balance-sheet of the Devonshire Great Consolidated Copper Mining Company, from March 1, 1853, to March 1, 1854.

RECEIPTS.		
Balance from last account	£26,799 5 8	
Carriage of ores outstanding per last account, since received	881 9 7	
Sales of copper ores sampled from		
Jan. to Dec., 1853, both months inclusive	£143,562 1 4	
inclusive:—24,378 t. 19 c. 2 q.		
realising		
Carriage of the same	10,417 2 1=£153,979 3 5	
Deduct amount outstanding March 1, 1854	1,292 12 10=	132,955 10 7
Sales of 1853: 17 c. 3 q. muddle ore, by private contract		1,045 8 3
Fees on transfers of shares and certificates		5,960 10 3
Interest on Exchequer Bills		110 8 8
Interest on money lent		66 8 0
Income tax deducted from dues on copper ores		353 8 0
Total		£182,322 14 6
Balance brought down	£15,210 4 2	
EXPENDITURE.		
Mines' cost, from January to December, 1853, both months inclusive	£70,115 3 7	
Dues on copper ores sold from Jan. to Dec., 1853, both months inclusive	12,117 1 4	
Remitted on account of cost for January, 1854	5,000 0 0	
Timber imported for use of the mines	5,600 10 3	
Expenses of the Tamar Fishery	5,600 11 1	
Balance of sum voted for house built at Beercause	900 0 0	
Poor's rate and other taxes at Tavistock	1,161 17 11	
Income tax: one year to Michaelmas, 1853	1,365 14 11	
Sum voted at the annual meeting, held May 2, 1853, for the promotion of the education of the children of the miners employed at the Devon Great Consols Mines	100 0 0	
Compensation to the managing director at Tavistock, 1 yr., to Dec. 31, 1853	600 0 0	
Expenses in London:—Salaries of the secretary and clerk, rent of offices, stationery, postages, printing, reports, receipt stamps for dividends, &c.	£686 1 5	
Compensation to directors and auditors, one year, to May 2, 1853	442 0 0=	1,128 1 5
Dividends paid, 6½ per share, on 1048 shares		64,512 0 0
Balance:—Cash at the bankers in London	£1,819 16 3	
Money at interest on call	1,001 17 6	
Cash and stamps in the office	34 10 0	
Cash at Tavistock	200 0 0	
Bills receivable	12,154 0 5=	15,210 4 2
Total		£182,322 14 6

Examined.—Signed, JOHN THOMAS, FRANCIS MORRIS, Directors.

Part II.—Balance-sheet of the Devonshire Great Consolidated Copper Mining Company, from March 1, 1853, to March 1, 1854.

LIABILITIES.		
Shareholders' capital	£1,024 0 0	
Balance of mines' cost for January, 1854	549 5 4	
Mines' cost for February, 1854, including merchants' bills	5,575 0 1	
Dues on copper ores:—Sold 19th January, 1854	£278 16 0	
Sold 23d February, 1854	1,398 4 9	
Sale 23d March, 1854, estimated at	970 0 0=	3,247 0 9
Income tax, half-year to 25th March, 1854		735 9 3
Water rent to 25th March, 1854		187 10 0
Salaries, rent of offices, &c.		450 0 0
Balance carried down		114,074 5 0
Total		£125,866 10 10

	ASSETS.		
	Surface.	Underground.	Total.
Wheal Maria	£6,886 4 2	£817 2 6	£7,698 6 8
" Fanny	1,951 2 6	1,305 0 0	3,257 2 6
" Anna Maria	9,836 10 0	2,705 14 0	12,542 4 0
" Josiah	12,345 12 0	2,958 16 0	15,307 8 0
" Emma	3,608 6 4	100 0 0	4,013 6 4
" Thomas	648 19 6	295 17 0	1,044 16 6
South lode	833 4 0	217 13 0	1,040 17 0
Wheal Fremont		866 0 0	£866 0 0
In store:—Iron, brass, rope, nails, and sundries			3,774 0 0
Timber, iron, coal, &c., on quays			3,483 6 0
Copper ores raised in January, and sold 23d Feb., 1854, and carriage, 2322 tons			£18,026 2 6
Copper ores raised in February, for sale 23d March, 1854, computed 1964 tons, and carriage			12,621 8 0
Copper ores and halvans on surface, computed 4730 tons, less dressing cost and dues			17,251 8 6=
House built at Beercause			3,500 0 0
Office furniture in London			50 0 0
Amount outstanding for carriage of ores sold to the 31st December, 1853, per Part I.			1,023 12 10
Exchequer Bills in hand 3000l.—Market value 1st March, 1854			5,148 10 10
Balance per Part I.			15,210 4 2

Auditors' Report.—We, the undersigned, having examined the within balance-sheet (Part I.) of receipts and expenditure of the Devon Great Consolidated Copper Mining Company, from the 1st March, 1853, to the 1st March, 1854, and compared the vouchers with the payments, find the same to be correct. We also find that the balance of 1853: 16s. 2d. at the bankers agrees with the pass-book; that there is a balance of 200l. in the hands of the managing director at Tavistock; and that bills amounting to 12,154l. 0s. 5d., and Exchequer Bills for 5000l., were in hand on the 1st March, 1854, the sum of 1001l. 17s. 6d. being lent out at interest on call.

Signed, J. DEANE BROWNE, MICHAEL H. WILLIAMS, Auditors.

The report on the mines (a lengthy document) was then read, as well as an estimate of the quantity of ore in reserve, amounting to 72,490 tons; the tabular statements referred to in the report were also laid upon the table. The report of the directors, as also that on the mines, appeared to give great satisfaction, and the usual resolutions for receiving and adopting them, re-electing the retiring directors and auditors, &c., having been passed, the meeting separated.

TAMAR MARIA MINING COMPANY.

An adjourned general meeting of shareholders was held at the George and Vulture Tavern, Cornhill, yesterday—Mr. S. WATHERLY in the chair.

The minutes of the last meeting having been confirmed, the following statement of accounts was submitted:—

To cash from last account	£ 30 4 4
To amount received by call, and additional shares under conversion	409 0 9 = £519 5 1
By mine cost, merchants' bills, printing, advertisements, &c.	234 18 7
Cash balance at bankers	£384 6 6
ASSETS.	
Cash in hand, as above	284 6 6
Arrears of call upon shares converted	133 5 0
Call upon shares remaining for conversion	136 17 6 = 574 9 0
LIABILITIES.	
Merchants' and other bills	54 0 0
Balance in favour of mine (in addition to the value of 1600 shares to be issued, at par, say 1056/.)	£390 9 0

The following report was then read:—

In accordance with your instructions, your committee have proceeded to carry out the conversion agreed upon at the last two special general meetings, and have much pleasure in reporting that up to this date only 880 shares remain for exchange; from the parties holding these certain letters have been received, complaining of the absolute nature of the conversion, and its consequences of forfeiture by non-compliance; but although the committee regret that every one should not have fallen in with the almost unanimous wish of the meeting just referred to, they need hardly add that no other course is open to them, but faithfully and consistently to execute such arrangements—consequently, they have been obliged to proceed to the forfeiture of those shares, and a special general meeting will be held at the close hereof to consider the confirmation. The committee must, therefore, in the exercise of their duty, ask the meeting to confirm their act; but they willingly submit that a further concession should be granted until the 15th of July next for compliance with the resolutions of the general meeting in January. They are the more actuated to this course by the fact of the available balance in hand, and that the gold question must necessarily remain until more satisfactory information of the practical use of the machines is obtained, and more especially as it is impossible to obtain a trial of the gossan and quartz now in town from the mine, a letter from the manager of Berdan's Reduction Works having been received, announcing his inability to make an experiment until the 15th instant. The balance-sheet exhibits a cash balance of 284 6s. 6d., and a balance of assets over liabilities of 3204 9s., together with 1600 shares remaining unissued, which would increase the available balance of assets to 1574 14s.

The accounts and report of the committee were unanimously received and adopted. The meeting was then made special, to consider the confirmation of the forfeiture of the shares, when a resolution was passed, confirming the forfeiture made by the committee, on the 15th of April, of 800 shares; but in order to give the holders of such scrip certificates an opportunity of avoiding such forfeiture, the secretary was authorised to allow the conversion of such shares up to the 15th of July next, after which period all scrip certificates should be sold by public auction, the proceeds to be held in trust for the holders of the old certificates.

The resolution was carried unanimously, and a vote of thanks to the chairman closed the proceedings.

CASTLE DINAS MINING COMPANY.

An extraordinary general meeting of shareholders was held at Salvador House, Bishopsgate, yesterday—Mr. DALLAWAY in the chair.

The notice convening the meeting having been read, and which stated merely that the meeting was called for the forfeiture of shares.

Mr. STAINBY expressed some doubt, as this was a special meeting for that purpose, whether they could legally go into any other matter. The Chairman thought the meeting might discuss any question touching the interests of the shareholders, notwithstanding the wording of the notice. He would not say they had power to pass resolutions irrelevant to the object for which the meeting was called; but surely they were at liberty to bring any subject before the meeting for discussion. He thought it rather a serious matter, to bring shareholders from a distant part of the country, and restrict them to one particular question, when there were others of vast importance to be considered. The wording of the notice was not sufficiently comprehensive; there should always be added the words, "and any business."

Mr. STUBBS agreed with the chairman, that they were not bound to confine themselves to the consideration of one particular subject.

Mr. R. P. PRICHARD expressed a similar opinion. Mr. GOSSE had some doubt whether, under the peculiar circumstances of the case, the meeting could legally forfeit any of the shares upon which the last call had been made. This was a point of some importance; for in the report upon which the call was made, there was a sort of guarantee held out to the shareholders, that these machines would be fixed, and realise a dividend in the course of a short time from the date of the meeting, which was held in March last; but, perhaps, it was premature to go into this question at present, because it might be that the machines were now in operation.

Mr. BRUNTON was sorry to say they were not. He had received a letter from Capt. Brewer, stating that one of the basins was cracked in two places, and was utterly useless; and as it was delivered in this imperfect state, there were sufficient grounds to justify them in returning it upon the hands of the manufacturer.

The Chairman said that gave rise to another important point—What was stated in the contract?

Mr. BRUNTON said there was no written contract. The agreement was, that two machines were to be made, similar to that which was at work at the Windsor Iron Works, and to be got ready, and delivered at Bristol within a given time. So far, however, as the completion of the machinery by the time specified was concerned, the agreement was broken, considerable delay having taken place between the time of giving the order and the arrival of the machines at Bristol. In reply to the chairman, Mr. Brunton said he had not seen the damaged machine himself; but both were, he understood, incomplete in other respects. The absence of a written contract was, he thought, rather in favour of the Castle Dinas Company than otherwise.

The Chairman thought these machines were delivered in as imperfect a state as anything could well be; and enquired of Mr. Brunton when he was last at the mine?

Mr. BRUNTON said he had not been there since the last meeting.

The Chairman could hardly understand Mr. Brunton's position. When Mr. Brunton undertook to continue the purchase, he (the chairman) understood that the company were to have the benefit of his services.

Mr. BRUNTON said, on the contrary, he distinctly stated that he could not attend regularly to the mine, in consequence of his engagements in Wales.

The Chairman asked Mr. Brunton if any correspondence had taken place between him and Messrs. Nourse and Co., the agents for Mr. Berdan, respecting the imperfect state of the machines?

Mr. BRUNTON said there had, and that those gentlemen had expressed their regret that there should have been any cause for complaint. He (Mr. Brunton) had not brought the letters which he had received from those gentlemen with him; nor had he any copies of his own letters.

The Chairman thought the best thing that could be done would be for a deputation to wait upon Messrs. Nourse, and hear what they had to say upon the subject.

A SHAREHOLDER observed, that parties would not doubt refuse to pay the call until the contract entered into at the time such call was made was effected.

Mr. PRICHARD said he had seen the machines, and did not think the cracks in the basins so formidable as the meeting might suppose. Still, Messrs. Nourse and Co. were bound to supply a perfect machine, which they clearly had not done.

A SHAREHOLDER thought there was great reason to complain of the committee for the way in which this business had been done; anything more loosely conducted he had never seen. These things being undertaken on the part of others, ought to be conducted with the utmost strictness and regularity.

Mr. GOSSE said he thought the committee would find, if they brought any action against the shareholders for the recovery of this call, it would be resisted.

A SHAREHOLDER observed that the way in which the affairs of the company had been managed appeared to him to be the most monstrous piece of negligence ever heard of; and if he had not paid his call, he certainly would not have done so after what he had heard to-day.

The Chairman thought they were bound to insist upon the order being completed by a certain time.

Mr. BALL thought there was something exceedingly monstrous in Mr. Gosse's proposition. To say that the shareholders were responsible was absurd, such an assertion would not bear the light of day, and he was satisfied that no court of law in this country would listen to such a defence.

Mr. STUBBS expressed a similar opinion, and suggested that Mr. Stainby be requested to write to the shareholders in default, peremptorily informing them that if their arrears were not paid within a certain time legal proceedings would be taken for the recovery of the same.

The Chairman said he could not help expressing his feeling that the committee had neglected their duty in not demanding weekly reports from the mine, and that the purchaser had grossly mismanaged himself in the matter.

Mr. GOSSE considered it should be an acknowledged principle in mining that the shareholders should be furnished with such reports—that they ought not to be kept in the dark.

A SHAREHOLDER said it appeared to him that at present no one was paying any attention to the property. The committee had ordered the machine, but they did not seem to care anything about its delivery.

Mr. BRUNTON said the arrangement was that it was to be delivered at Bristol to the agent of the Queen steamer; and that the delay arose in getting it there.

A SHAREHOLDER said that there appears to have been no person there connected with the company; nothing was ever managed so badly.

The Chairman said he really could not understand upon what principle the purchaser could demand his salary for the last two months.

Mr. BRUNTON said he had given all the attention to the matter that he possibly could find time to devote to it. He had furnished several plans, and had been in constant communication with Mr. Vivian upon the subject. There had been no delay on the part of the agents at the mine; the delay had been on the part of Messrs. Nourse and Co.

Mr. BALL said he could bear testimony to the efficient services Mr. Brunton had rendered the company; and he (Mr. Ball) was perfectly satisfied with his exertions.

A SHAREHOLDER complained of the conduct of the man Coxon, who was sent down with the machine to superintend the fixing, &c., as an engineer, at a salary of 31. 3s. a week. Not only was this party too idle to work, but utterly incompetent to perform the duties; and yet this idle and ignorant fellow had received from the pockets of the shareholders between 30s. and 40s. He had, however, since been discharged; but it did not say much for the judgment of the committee to have allowed such a man to have been appointed.

In reply to the chairman, Mr. BRUNTON said he had received a letter from Capt. Brewer, stating that, in the course of a rather wet day, he should be able to let him know when the machine would be ready.

The Chairman said, if it had not been for the very sanguine temperament of Mr. Brunton, they would certainly not have been in their present difficult position; and, as he had led them into the difficulty, he was bound, as a gentleman and a man of integrity, to help them out of it.

Mr. BRUNTON observed that there was another reason why he should do so: he was himself the holder of something like 1600 shares.

After considerable discussion, it was arranged that a deputation wait upon Messrs. Nourse and Co. as soon as the business of the meeting was disposed of.

A vote of thanks to the chairman terminated the proceedings.

ROYAL HIBERNIAN MINING COMPANY.

A meeting of shareholders in this company was held at the George and Vulture Tavern, George-yard, Cornhill, on Wednesday—Mr. HENRY LACHIN in the chair.

The Chairman said it was his duty to call their attention to the report which had been framed by the committee, with whom they had trusted the management of their affairs; and as he always considered one fact worth one hundred assertions, he thought he could do better than request the secretary to read the report. If it met with their approbation, they would adopt it, otherwise he should be glad to hear any observations they might make. He would now call upon the secretary to read the report—Mr. COVENEY (the secretary) then read the following report:—

Your committee, in presenting this, their second, report, congratulate the shareholders on the progress made during the six months in developing the mines. The Clogher Mine, to which it was arranged at the general meeting all the strength should be applied, has continued to improve in appearance, and the shaft has been sunk to the depth of 20 fms., agreeably to the directions of Thomas Richards, Esq., who had surveyed the mine in September last, and whose report was presented to the proprietors at the general meeting, and on his suggestion the captain has begun to drive east and west, in doing which he has continued to get up some good specimens of lead ore from the lode, which at this depth is about 15 in. wide, and which there is every reason to hope will very shortly make a productive and profitable lode. Your committee had hoped to have been enabled to place before you a second report from Mr. Richards, who has been requested to again inspect the mine, but has been prevented going over in time for this meeting, which has been called together rather earlier than was anticipated. Your committee, remembering the pledge given, that of your committee having had some specimens of gossan and quartz sent up for the purpose of being tested for gold by Berdan's crushing-machine, and they have the satisfaction of laying before you the certificate of the company, from which it will be seen that gold to the extent of 3 ozs. 4 dwts. 23 grains per ton has been found to exist in the Castlemaine Mine, which at the last meeting it was considered desirable should not then be further worked for lead, in consequence of the difficulty experienced in keeping down the water, and the knowledge that the East Anagh Mine, on the opposite side of the road, and in immediate proximity to the Castlemaine Mine, was about to be worked, which your committee had hoped would, ere this, have enabled the captain of your mines to have resumed at Castlemaine. Your committee, therefore, have convened the present meeting to lay a statement of these facts before the shareholders; and, having no reason to doubt the accuracy of the test which has been made, they deemed it desirable to satisfy themselves as to the quantity of gossan and quartz of a similar nature to that tested which was available: and this, by the kindness of Mr. Walter Hills, one of your committee, who immediately visited the mines, they have satisfied themselves on, and are able to assure you that there is an abundant supply of both, your committee, remembering the pledge given, that the funds in hands should not be expended without again calling you together, feel warranted in advising, that before incurring so large an outlay of your funds as will be necessary (700l. to 1000l.) to erect and put in working order one of Berdan's patent machines, that a ton of the gossan and quartz should be immediately brought over and subjected to the test; when, should the same satisfactory results be obtained, that they be empowered to purchase and erect at Castlemaine one of the above, or of such other of the machines which have been, or may be, introduced and considered the most serviceable for the purpose of extracting gold.

And your committee are further warranted in proposing this course, by the fact that, although the East Anagh Mine has not been worked deep enough to allow of the resumption of operations at Castlemaine, from the same cause as before, the water being too strong for manual labour to keep under. Your chairman, Mr. Walter Hills, has had an interview with the directors of that company, on the subject of an equitable arrangement for working the Castlemaine and the East Anagh Mines conjointly; and your committee feel assured, from the tenor of the conversation, that should the shareholders think proper to invest them with power to arrange such working on equitable terms, it would be done with great advantage to both bodies of proprietors. Your committee beg to state that, after the payment of the last cost sheet, the cash balance in banker's hands, in favour of the company, is 2971 3s. 10d.

Your committee have to report that your secretary, Mr. Coveney, who has given his services for a nominal salary, has resigned his engagement with the company, and as the management of the mines now will not entail the same amount of labour as when they were first projected, your committee have the satisfaction of informing you that they have made arrangements efficiently to conduct the business in London with a saving of about 1500l. per annum, while they have to report a saving at the mines in salaries of about 1000l. a year; their object being now, as it has been from the commencement, to get the mine done efficiently, with as few standing expenses as possible. In conclusion, your committee feel it must be obvious to the shareholders, that the existence of so large a proportion of gold (upwards of a 1/2 lb. to the ton), cannot fail to yield a large return for the outlay, and they cannot but be sanguine as to the profits of the undertaking.

A SHAREHOLDER wished to know the amount of stuff operated upon.

The Chairman said about 100 lbs.

Mr. TURNER observed that it was rather singular the various machines hitherto introduced yielded gold in small quantities, but when they got into operation the results were totally different.

The Chairman said they were in doubt whether they should incur the large expenditure in purchasing a machine without taking the opinion of the shareholders, but if they obtained the same results from several tons they ought to be satisfied.

Mr. TURNER observed that in small quantities Perkes's machine had produced 5 to 6 ozs. to the ton, but when large experiments were made it had produced nothing.

A SHAREHOLDER suggested that they had better wait until Berdan's machine was thoroughly tested by other companies.

The Chairman said, as a matter of business, he should propose that the report be adopted.

Mr. TURNER said he should propose as an amendment that the consideration of the erection of a machine be deferred for the present.

Mr. WALTER HILLS, one of the committee of management, at his suggestion, seconded the amendment, which, upon being put, was carried unanimously.

A lengthened conversation ensued, which ended in a resolution being carried, authorising the committee to enter into a negotiation with the East Anagh Company to erect a steam-engine to unwater their mines, and the Castlemaine Mine, belonging to that company.

The proceedings terminated with a vote of thanks to the chairman.

(Since the meeting, we are informed that the chairman has received a communication from the proprietors of Dr. Collier's machine, offering to crush and test, free of expense, 10 tons of stuff, which he has arranged to avail himself of, so as to set at rest the question in large quantities.)

THE DARIEN EXPEDITION.

At the last periodical meeting of the Royal Geographical Society (Sir R. I. MUNICHON in the chair), the SECRETARY read an official report on the Isthmus of Darien, communicated through the chairman, by Commander J. C. Prevost, R.N., of her Majesty's ship *Virago*. Entering on the Pacific shore, the commander had sailed up the Savana River as far as it was navigable for boats, which was about 22 miles from its mouth. The party then landed, and commenced their overland journey on Tuesday, the 20th of December last. They directed their course by compass as nearly as they could for Port Jaccos, on the Atlantic coast. It was necessary to cut their way through thick underwood and shrubs, and they could not accomplish more than two or three miles in a day. They penetrated in this way 26 miles, crossed several considerable rivers, and ascended a hill 800 feet high; but owing to the density of the forest, were not able to obtain a sight of the Atlantic. On the 15th day they were obliged to return, and discovered that a guard of four men, left at a rancho on their way, had been murdered by Indians. This put an end to the expedition.

Mr. EVAN HOPKINS said, he knew the country well, and had surveyed it from Viraguas to the Darien, as far as the upper branches of the River Bayano, for the Government of New Granada. Commander Prevost's report was in accordance with the result of his (Mr. Hopkins's) examination, both as regarded the physical obstacles, and the hostile character of the Indians. The chain of the Cordillera of the Darien varied from 2000 to 3000 feet high, from the back of Portobello to Choco. The average height of the chain was ascertained by a theodolite—indeed, the chain is so high and conspicuous as to be seen from the shores of both coasts. He (Mr. Hopkins) expressed his surprise that such a loose report as that presented by Dr. Cullen should have led to such an expedition. It was evident at first that Dr. Cullen had not crossed the real chain, and that his observations had been confined to a small plot of ground between two rivers in the Gulf of San Miguel. The most interesting point next to Panama was between the River Bayano and Mandinga. The former is a magnificent tidal river on the Pacific side, and the latter a fine bay in the Caribbean Sea; but the intervening chain of granite, porphyry, and slate, which is about 15 miles wide, and upwards of 1500 feet high, renders such an object impracticable. He (Mr. Hopkins) stated that Panama was the narrowest, and the point of lowest depression of the Isthmus, and therefore the most eligible part for making a communication between the two seas, whether as a railway, canal, or an absolute strait. He considered that the railway (which he projected, and recommended to the attention of the Government, which is now almost completed) would serve the present purpose. In the event of a water communication being hereafter required, he thought a strait preferable to a canal, as he suggested some time ago.

Mr. Hopkins's map of the entire Isthmus of Darien, with an isometrical view of the Panama route and the railway, and several other maps, by Mr. Arrowsmith, were exhibited.

Lieut. Sir JOHN was invited to express his opinion, but declined to do so, on the ground that he was preparing an official report for the Government, founded on his survey of the country.

COTTON ROPES AND SAILS FOR SHIPS.—We are rapidly growing independent of the Czar of all the Russias. Some few weeks ago the manufacture of cotton canvases, and its applicability to sails of ships, were alluded to in our columns. Now we have to chronicle the fact that Messrs. Garnock, Bibby, and Co., of this town, have manufactured rope, which appears to be excellent and serviceable, from cotton yarn.

The rope is well adapted for running rigging, and its strength may be estimated from the fact that, in an experiment made by the manufacturers, it was found superior to the best qualities of Russian, French, or Italian hemp. The price will also be about 20 per cent. less than that of hempen rope. We learn further, that the rope has been subjected to a tarring process, which will have the effect of preserving it from rot. The cotton canvases, it seems, is 10 per cent. cheaper than the linen or flaxen fabric.—*Liverpool Times*.

Mr. John Horridge, of Rock Ferry, has made a proposal to the dock committee to work the docks by an improved system of railroads and steam apparatus, whereby, he says, 100,000l. would be saved to the estate. His proposal has been referred to the special committee.—*Ibid*.

The *James Pilkington* the largest iron ship ever built in Liverpool, has been successfully launched from Mr. Getty's yard. She is owned by Mr. Edward Bates, and is intended for the East India trade.—*Ibid*.

HOLLOWAY'S PILLS, A SPECIFIC REMEDY FOR NERVOUSNESS, LOWNESS OF SPIRITS, AND GENERAL DEBILITY.—Mrs. Mary Walters, of the Woodside, near Dudley, had been a sufferer for several years from lowness of spirits and nervousness, together with settled pains in the head and stomach, arising from bad digestion; and notwithstanding the various remedies tried, she obtained no relief. In a state of mind bordering on despair, she embraced the opportunity of taking Holloway's pills, which were given to her by a benevolent lady, and this excellent medicine had so good an effect, that she was induced to continue them for a short time, which resulted in her being restored to health.—Sold by all druggists, and at Prof. Holloway's establishment, 245, Strand, London.

STRENGTH OF LOCOMOTIVE BOILERS.

We have just received a detail of experimental researches to determine the strength of locomotive boilers, and the causes which lead to explosion by Mr. William Fairbairn, F.R.S. These experiments were undertaken in consequence of an accident which took place through the explosion of a locomotive engine at Manchester, on the eastern division of the Lancashire and North-Western Railway, with a view to determine the real cause of the explosion, and to register the observed facts for future guidance in guarding against such fearful catastrophes. From a careful examination of the boiler a few hours after the explosion, one side of the fire-box was completely severed from the body of the boiler, the interior copper plates forced inwards upon the furnace, and with the exception of the cylindrical shell, which covers the tubes, the whole of the engine was a complete wreck. Mr. Ramsbottom, the locomotive superintendent, in a report to the directors, stated that the engine was made by Messrs. Roberts, and Co., in 1840, had been worked up to 60 lbs. per square inch, and had run in all a distance 104,723 miles, a great part of which had been entirely without load, or nearly so. The cylinders were only 14 inches diameter, and it had since 1840 been merely used as a pilot engine to conduct trains through Standedge Tunnel. The box was only 14 inches from seven to six-sixteenths of an inch thick, and would have safely run another 100,000 miles. The engine had been in the repairing shop for months; the outer shell was scarcely affected, the stays and every part appeared perfectly sound, and it was believed the boiler could have burst under less than a pressure of 300 lbs. per square inch. The old stays, which had its third partially damaged from being run out of the box by the explosion, was screwed by hand into a copper plate by the old thread to a depth equal to the thickness of the fire-box, but not rivetted; and it required a dead weight of 8204 lbs. to pull it equal to 303-85 lbs. per square inch. Another stay, not injured, required a force equal to 340 lbs. per square inch to draw it. Further experiments have shown that stays screwed, but not rivetted, required a force to lodge them of 18,260 lbs., or 8 1/2 tons; and rivetted, 24,140 lbs., or 11 tons, giving an average of 785 lbs. per square inch to burst the boiler while in one of recent construction, where the stays are thicker, formed into squares of 4 or 4 1/2 in., the resisting powers will probably be increased to 850 or 900 lbs. per inch, being seven or eight times the high working pressure.

Experiments were then made on an engine of the same age, constructed by the same makers, and in every respect a *fac simile* of that which exploded. The boiler was furnished with a valve exactly 1 in. area, a lever 15:1, giving the weight on the valve 35 lbs., and having a suspended, which indicated with the lever 50 lbs., the following results were obtained:—

No. of lbs. on scale.	Weight per square inch on scale.	No. of lbs. on scale.	Weight per square inch on scale.
5	35.0	5	125.5
3 1/2	50.0	3 1/2	147.9
3 1/4	57.5	3 1/4	169.9
3 1/8	63.0	3 1/8	187.9
2 3/4	72.5	2 3/4	215.9
2 1/2	80.0	2 1/2	243.9
2 1/4	87.5	2 1/4	271.9
2 1/8	95.0	2 1/8	300.0
1 3/4	102.5	1 3/4	328.0
1 1/2	110.0	1 1/2	356.0
1 1/4	117.5	1 1/4	384.0
		1 1/8	412.0

At 110 the joints began to leak, at 140 the leakage increased, 170 further increase, and at 207-6 one of the bolts of the cross-bar over the fire-box broke, and the experiment was discontinued.

From these investigations, Mr. Fairbairn arrives at the conclusion that the boiler could not have burst under a less pressure than from 300 to 350 lbs. upon the square inch, from the fact of finding the upper part of the fire-box in every respect perfect; and he is confirmed in the opinion that steam of high elastic force must have been present to cause the disastrous explosion which eventually occurred. The experiments appear to be sufficiently conclusive to enable us to judge of the dangers to which people expose themselves, under circumstances where the necessary precautions are not taken for allowing the steam thus generated, within the boiler, to escape. The great majority of accidents of this kind have arisen during the time the engines are standing, probably the safety-valve fastened, and a brisk fire under the boiler. How often do we find this to be the case, in tracing the causes of these wholly and unfortunate occurrences.

In order to test the strength of the stays of fire-boxes, two thin plates were made, 22 in. square and 3 in. deep, with stays at distances to correspond with the sides of the fire-box; and it was conclusively proved that the flat surfaces, as compared with the top, or even the cylindrical part of the boiler, are far superior in strength. With further experiments on copper and iron bolts, it was found that an iron stay and copper plate not rivetted, have little more than half the strength of both of iron stays, screwed and rivetted into iron plates, are to iron stays, screwed and rivetted into copper plates, of the same dimensions, have only one-half the strength of those where both the stays and plates are of iron. These are facts in connection with the construction of locomotive boilers, and other descriptions of boilers having flat surfaces, which may well be relied on, and that more particularly when exposed to severe strains the elastic force of high-pressure steam.

COMBINATION OF INDIA RUBBER WITH CERTAIN METALS.

Mr. Charles Goodyear, of St. John's-wood, has patented an invention, which for its object the manufacture of articles of a hard compound, made of India rubber and sulphur (with or without other matters), subjected to heat, the invention consists in combining with such hard compound, in the manufacture of articles from thin surfaces of gold, silver, or other metal exterior to, or interior of, the hard compound. The gold or silver is by preference to be shaped in the moulds, and the prepared India-rubber is then to be introduced into such moulds, and thereby moulded in contact with the gold, silver, or other metal in the moulded state, the articles are to be subjected to heat, in order to produce a hardening effect to the India-rubber compound.

The forms of the articles which may be manufactured are said to be very various, and each article may be coated either wholly or partially with metal. It is stated that the object of the invention is to obtain light, strong, and tough prepared the hardened compounds of India-rubber with the ornamental and other properties of metal, combined in the making of one article. Thus, supposing it be desired to make a cup, or partly coat, a cup or vessel with an exterior coating of gold, silver, or metal, and to cut therefrom the device required, and then, by stamping or otherwise, to make it of such form as to fit the mould in which the cup or vessel, whether of India-rubber, is to be formed; and, having introduced the metal, whether of one or more pieces, the plastic compound of India-rubber is to be introduced and pressed into form in the mould, by which the metal will be introduced, and partially imbedded, in the plastic compound. It is not, however, necessary that the metal coating should be perforated, as it may be embossed or otherwise; but it is desirable that it should have projections or indentations where it comes in contact with the plastic compound of India-rubber, as by such means the combination of metal with the India-rubber compound is better insured, or the parts of the articles are of metal may be made up of wire-work, or cast, or otherwise formed. When the metal is to be inside the article of India-rubber compound, the metal is moulded and first shaped, and then the India-rubber compound is to be introduced, and pressed into form in the mould; the lining or part lining of metal is to be introduced, and pressed therein, and it is to be retained therein by the convex portion of the metal, which is to be retained therein by the convex portion of the metal. Although, generally, sheet metal is preferred for these purposes, the metal may be cast or otherwise formed or shaped, and similarly applied in the act of moulding the article of India-rubber compound. When the metal is to be applied to the articles made solid with the India-rubber compound, such as the metal ends of handles and others, the metal, made into the desired form and hollow, is to be introduced into the mould, and the India-rubber compound is to be pressed into the mould, and care being taken, in all cases, that the parts of the article which are composed of the rubber compound are pressed thereto, and rendered hard by heat, the metal will be separated from the hard compound of India-rubber. By these means articles of various kinds may be manufactured, composed partly of hard India-rubber compound, and partly of metal; and the parts of metal may be either made from metal wire, or castings, or otherwise. The patentee states that, where the metal is to be used as an act on prejudicially by sulphur, he causes the metal to be lined with India-rubber, and the India-rubber compound contains sulphur, which is to come in contact with the India-rubber compound, and the metal is to be lined with India-rubber, or other varnish that does not act on the metal, and the India-rubber compound is to be introduced, and pressed into form in the mould; the lining or part lining of metal is to be introduced, and pressed therein, and it is to be retained therein by the convex portion of the metal, which is to be retained therein by the convex portion of the metal.

Other matters, such as colouring matters, may be applied as heretofore, for about 100 lbs. to be gradually applied as follows:—The heat is raised slowly, for about 2 hours, to 230° of Fahr., and retained at that temperature for about 2 hours; it is then raised gradually, during the remainder of the six hours, up to 250° or 260° of Fahr., the lower of these two temperatures appears to produce the more tough and elastic compound, and the latter the character of the compound of India-rubber with certain metals.

The patentee claims the mode of combining India-rubber, and the manufacture of articles, by moulding the compound of India-rubber, and the hardening change by heat, when in contact and combination with the metal.

THE ELECTRIC LIGHT.—We understand that the Electric Power, Light, and Colour Company commence lighting the terminus of the Great Northern Railway at King's-cross, on Monday next, the 8th inst., under the terms of their contract with that company.

BRITISH MINES.

deposited in the bank of the lode, we have recently found several fine specimens of barytes, which

EAST WHEEL GEORGE.—The lode in the 44 fm. level east is 2 ft. wide, producing good stones of ore—let to six men, at 97.98. per fm.; the lode in the 44 ft. level west is composed principally of capel, quartz, and mundie—let to four men, at 97. per fm. 1 let two pitches—one to, in 1/2. tribute; the other 12s. in 1/2. tribute.

—set to four men 3 fms. at 2½ lbs. per fm.; the lode in the winze below this level, small, in consequence of a floor of soft killas having come in from the north, which think will not continue long, when we may expect the lode will improve again; the winze is now idle, in consequence of the men having refused it at 2½ lbs. per fm.

the rise in back of the 43 east the lode is 2 ft. wide, worth about 82. per fm.—set to six men 1 fm. 77. 100. and to be paid for putting in a shaft, &c. The slopes to the east of the rise are worth 125. per fm.—set to two men 2 fms. at 34. 5s. per fathom.—THOMAS BARNETT: May 3.

MOUNTS BAY CONSOLS.—The engine-shaft has been sunk in the past week 3 ft.; the ground is composed of a fine blue kila. The north cross-cut has been driven 3 ft.; the ground is much the same as last reported. The south cross-cut has been driven 4 ft.; the ground continues favourable for driving. We commenced driving east on the lode crossed through by the south cross-cut by four men. We find the lode increasing in size; it is now 20 in. wide, and of a kindly appearance.—J. RICHARDS: May 3.

NANTEOS AND PENRHU.—At Penrhui, the lode in the 46 fm. level, 6 fms. west of shaft, will yield from 4 to 5 cwt. of ore per fm.; the lode in this level east will yield from 18 to 20 cwt. of ore per fm.; there is still much water in this end. The lode in the 36 east will yield from 7 to 8 cwt.; the slopes over this level, 20 fms. east of shaft, will yield 4 cwt. of ore per fm. In the winze sinking from the 36 none of the lode has been taken down during the past week, on account of there being so much water.—PETER HOPKES: May 2.

NANTLE VALE SLATE QUARRY.—I beg to lay before you the following report on the proceedings of our works during the past month, which I hope will be satisfactory.—Western Quarry: A considerable portion of the lower depth of the overburden in this quarry has been removed during the past month, and now leaving but a small bulk necessary to be cleared, previous to finally staking the whole face, which will soon be completed. No drainage of water has yet taken place in the lower workings, but we are daily expecting it, as the miners have completed one yard of roofing. The portion of loose rock from the overburden, which has been removed in the past month, amounts to 204 yards, and the quantity cleared is 125 dozen yards long. It is expected before the end of the present month that some slate may be obtained from this quarry.—Eastern Quarry: I am very happy to report most favourably of the rock in this quarry, which has worked excellently; the blocks raised during the greater part of the past month were of the best quality, and have been converted into the larger size slates. At a depth of only 10 yards from the surface a large quantity of very valuable and most excellent blocks were obtained, and the same are still being met with this day at the same depth. The rock is still of the same quality as in the past month, and the valuable blocks have also been obtained—the rock here is very good, and promises many most excellent slates; we have sufficient rock on this side to occupy three or four months' working. During the first week of the past month we made but a few slates, this was owing to the whim not being in working order, and the construction of the incline tramways not being completed, so that our slate return did not amount to as much as we might have expected, in addition to which we lost two whole days during the month, so that allowing only three weeks for making slates, our return is not so very small. We hope during the present month to raise 150 tons, provided the rock proves as valuable as it promises. There is still much of the old rubbish in the bottom of the quarry, which we have several men actively employed in removing. On the north side we are also extending and throwing down the top, where at the depth of 3 yards only, the rock has yielded slates. The prospects of slate from this quarry are, I am happy to inform you, most favourable, and a large return may shortly be expected.—Tunnel: The roofing or roughing up of the tunnel is being proceeded with as favourably as can be expected; the miners have completed 1 yard of roofing; the working is now very bad, from the foul air and closeness. The total length of the tunnel, out previous to the process of roofing is 125 yards, and to reach the water, I am informed, will require an additional 3 or 4 yards of roofing, in the undertaking of which the drainage will, most likely, be effected, so that, in a week or so, I hope to be able to inform you of this important part of our undertaking having been accomplished.—D. A. DULMAN: May 1.

NORTH DOWNS.—The lode in the 100, east of west shaft, is 4 ft. wide, consisting mostly of hard quartz, spotted with yellow copper ore. The 90 end has reached sliding ground, and one part of the lode has gone off north, consisting mostly of quartz; the other part will produce 2 tons of ore per fm. We have set the men to rise against the winze sinking in the 80; the end will, therefore, be suspended before the communication is effected, which we hope to do in about a month. We have discovered the counterpart of the lode in the 80 winze, and we are now working it. We are now to day, we will report on it next week. The pitch in the bottom of the 90 will produce as much ore per fathom as it did a month ago, but in reaching the clay the produce for copper is not so great. I will forward you the setting-sheet on Monday.—JOHN PRINCE: April 29.

NORTH WHEAL BASSET.—In the 102 fm. level, driving west of the new shaft, the lode is 2 ft. wide, yielding 3 tons of grey and yellow ore per fm., worth 82. per ton. In the winze sinking below the 82 fm. level, east of the new shaft, the lode is 3 ft. wide, worth 107. per fm. In the 32 fm. level, driving west of Lyle's shaft, the lode is 8 ft. wide, with a branch of grey ore on the north part 18 in. wide, worth 507. per fm.—T. GLANTVILLE: April 29.

NORTH WHEAL ROBERT.—The lode in the 32 fm. level driving west is just as last reported, being about 3 feet wide—saving work. There has been no lode taken down in the 42 fm. level this week. In the cross-cut driving south the lode appears to be large, as we have cut no south wall as yet, but as far as we have seen the lode bears a very strong appearance, being composed of capel, spar, mundle, and good spots of ore. Our pitches and slopes are yielding fair supplies. In the end driving south from the trial shaft we have intersected several branches of gossan and priam, which bear just the same appearance as they have at Sortridge Consols when near the lode.—ANTHONY PARRIS: May 2.

OKALEY.—The prospects here are quite as good as I last reported to you; as to the quantity of quartz, there is plenty of it for ages; all that is now wanted is to select the quickest and cheapest means of abstracting the gold. The Roman workings continue to look well, and there is a mass of gold-bearing stuff, in which gold is becoming more visible every day. I believe it contains, also, a great deal of silver worth looking after.—R. ROBERTS: May 2.

OLD TREWETTER CONSOLS.—In the slope in the back of the 20 there is no material alteration since last report. In the slope further south in the same level there is no alteration. The stone in the old bottom is still producing good ore. We are now busy clearing the rubbish, &c., from the old bottom in this level; when completed we shall immediately put men to break ore. The slope in the back of the 27 is still producing good ore. In the new slope, further south in the same level, we are still desling the lode, which we shall break down in the course of a few days. We have commenced sinking the engine-shaft, which we shall push on as fast as we possibly can. We have this day completed clearing the cross-cut north to the silver-lode, and shall commence driving immediately.—Wheal Thomas: The lode in the 40, east of the shaft, is 18 in. wide, producing 54. worth of ore per fathom. In the 30, east of the shaft, the lode is 2 ft. wide, with good spots of ore.—Crinnis shaft: In the 122 we have not taken down the lode since last report. In the 112 east the lode is 3 feet wide. In the eastern winze, sinking under the 112, the lode is 6 feet wide, producing 3 tons of ore per fathom, worth 77. per ton. In the western winze, sinking under the above level, the lode is 4 ft. wide, producing 2 tons of ore per fathom. In the 40, south of Gill's, the lode is producing about 34. worth of ore per fathom. We have sampled 186 tons of ore this week.—JOHN LYLE: May 2.

PENCROSE CONSOLS.—The west shaft is down 10 fms. under adit; we have cut a pit, and commenced to drive on the course of the lode; east we see scarcely any alteration in its appearance since last report. The 20 end west is looking better within the last few days; the cross-cut between the 20 and 30 is looking just as last reported. We have sunk down the new shaft about 15 feet, and have cut a branch, but we expect it will take some weeks to cut the lode; the ground is as favourable as can be.—J. DALL: J. EDWARDS.

PENDEEN CONSOLS.—Since setting-day we have not much alteration in the lodes at Boreale's shaft, the two lodes still holding their courses; we are now down about 3 fms. below the 10 fm. level, and in 8 ft. more I expect the intersection of both the lodes. I hope we shall be able to see something of it before my next report, and before you leave London; the lode is improving very much. I think there will be more copper in the next taking down than there was in the last; the lode is still large, composed of mangle, copper, carbonate of lime, quartz, jasper, and glass; where we broke it last, in the 10 fm. level, it was from 6 to 10 ft. wide, very large and kindly for such a shallow depth; enough to convince any practical miner that there must be great deposits of ore at a reasonable depth. Being in the same strata as the Botallack and the Levant Mines, we could not expect to find much rich ore at this depth. In the former mine they discovered ore in the 33 fm. level; true, they had ore at a shallower depth, near the junction of kilaas and granite; in the latter mine, the ore was cut in the 54 fathom level. So you see we are in good ground; still in neither mine can there be seen a more promising lode at its depth.—W. EDWARDS.

PENHALE CONSOLS.—The engine-shaft is down for another level. We have commenced driving the 80 fm. level north and south; the ground in the south is favourable, lode 1 ft. wide, producing 8 cwt. of ore per fathom; in the same level north, ground moderate, lode 2 ft. wide, producing 8 cwt. of ore per fathom. In the 56 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 48 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 40 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 32 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 24 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 16 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm.; in the 8 fm. level, lode 1 ft. wide, producing 3 cwt. of ore per fm. In the 70 fm. level north the ground is moderate, lode 1 foot wide, producing 12 cwt. of ore per fathom. 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Pinacos in Mexico.—The usual monthly statement of receipts and expenditure, brought down to the 25th inst., shows an actual cash asset in hand of \$10,064 2 8. The balance at last month at being in the hands of the Mexican agents (\$16,000) still remains undrawn, the present rate of exchange on that city being unfavourable.

Quicksilver.—\$62 per quintal for considerable parcels.

Zacatecas Claims.—The only payment towards the liquidation of these claims which has taken place since last report has been the sum of \$369 39, received at the Custom House of Vera Cruz.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The annual assembling of the members of the British Association for the Advancement of Science will take place somewhat later in the present year than has been the case in former years. The end of the month of September had been mentioned as the time when these scientific meetings are to be held this year, at Liverpool. The reason assigned for this rather advanced period of the summer being selected, instead of for an earlier date, was the fact that the new building of the Association, which is now in progress of completion at St. George's Hall in that town, is far at least as late as to allow of the meetings of the various sections of the Association being held within one building.

and 1700L in dividends they had a balance of 1389L in the bank, and one of the value of 100L in stock. They had, moreover, only the day previous to this meeting, sold orders to the amount of 1018L, out of which they had declared a dividend of 10s. per share, being at the rate of 6d. on each original share, payable on the 9th May. On the examination of the books, the directors, who were present, and who had been previously in the adoption of the report, remarked that the 1018L realised from the sale of ore on the 27th was not included in the year's balance-sheet, but was receipts on account of the current year; and if they went on, as appeared likely, with the same amount of success, they would be able to declare another dividend next month. The sum of 1000L was voted to the widow of the late Mr. James Kirby, the former owner of the mine, and who sunk a large amount of money in driving the level in the district of the same name. The directors also recommended that the sum of 1000L be paid in the form of money should be presented to Mr. Fordham, in acknowledgment of his services, but that gentleman requested that the question might stand over until a sum

Wheat Williams, by Capt. S. Seecombe, of Phoenix Mine, and Capt. ...
Great Consols.

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Notices to Correspondents.

* * Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

DESTRUCTION OF IRONWORK IN COPPER MINES.—SIR: I read in your valuable Journal of last week a letter referring to the destruction of ironwork in copper mines, by "An Inquirer." As to the cause of such destruction, I beg to say that if your correspondent had been acquainted with chemistry he would have accounted for that fact by the affinity which certain metals have for precipitating each other. Iron and copper are an example of this law; and this property has been known to chemists for many years to account for the destruction of the pumps, &c. I beg to state that for every 32 parts of copper precipitated there are 25 parts of iron to supply the place of the copper; this will account for the great wear of the machinery where iron is used.—HARDMAN: London, May 5.

DESTRUCTION OF IRONWORK IN COPPER MINES.—SIR: In answer to the letter of "An Inquirer," in last week's Journal, I beg to state that cuprous water acts on iron in virtue of the greater degree of affinity which iron has over copper for assuming the state of a salt; hence it is, that when a salt of copper comes into contact with metallic iron, metallic copper is separated, while the iron enters into combination with the acid, or other non-metallic element of the copper salt. If we, then, suppose that in a copper mine the bright surfaces of the pitwork be brought into contact with the water of the mine, as it must be in the action of pumping, and that that water holds carbonate of copper in solution, the result may be the formation of metallic copper, and the production of carbonate of iron. It, therefore, becomes imperative necessary, that for the preservation of the pitwork of copper mines some method of separating the copper held in solution should be obtained; this is best effected by placing sheets or scraps of iron in the cisterns and at the bottom of the shafts, so placed that before the water has obtained access to the wind-bore it may have come into contact with the iron; the portions of iron should not be rusty, otherwise their object will be defeated. The sediment obtained by this means will contain from 40 to 50 per cent. of fine copper; it must be carefully collected at intervals, varying according to the quantity of water and amount of copper contained in the water, and the pieces of iron replaced by others. In mines where the ore is altogether the yellow sulphide, or copper pyrites, these precautions need not be so much attended to, as the quantity of copper held in solution will not materially affect the ironwork, nor will it pay the cost of collecting. The process will be used with the greatest success in mines where the ores are the carbonates, the black oxide, and the grey ores or sulphides of copper. During the working of the Orocua Mines, in Ireland, nearly 16,000 lb. worth of copper was obtained by these means in the comparatively short space of seven years.—G. D.: May 5.

CABREY WENT.—SIR: At a meeting, held last October, a committee was appointed to form new rules and regulations, to investigate the affairs, and report upon the prospects of this association. Having heard nothing more of the committee, and not being able to obtain any information of the results at the office, possibly some of your readers can enlighten.—A SHAREHOLDER: City, May 3.

MELBOURNE GOLD MINING COMPANY.—SIR: Can any of the shareholders give me some information respecting the actual position of this company? The Earl of Devon (the honorable chairman) and the directors, though very silent, I trust cannot be so dishonest as to countenance the abstraction of money from the pockets of shareholders without rendering an account of its expenditure; and, if they cannot carry out their plausible schemes, they should, most certainly, arrange to return a portion of the capital subscribed.—GEO. GREENMAN: 4, Rail Gate, Lincoln, May 1.

WHEAL KUTTY (ST. AGNES).—"A Cornishman" asks how much of the 17,500 l., stated as paid on the 5000 shares, has been expended, and what amount remains in hand at this moment; and whether, under the present new management, the undertaking is more likely to prosper than the old one?

WYNGOAN SLATE AND SLAN QUARRY, FENTINO.—SIR: May I trouble you to correct a slight error in the report on this quarry, which appeared in your last week's Journal? The vein is therein stated to be 1½ mile long; this, to be right, should be 1½ mile, for throughout the distance it can be definitely traced throughout. The second error occurs in describing the breadth of the vein, which, instead of being 30 yards as therein stated, should have been 60 yards at or a little above the place mentioned. I have no interest whatever in this quarry; but having been professionally engaged there on an engineering survey, I can vouch for the facts herein adduced from actual measurement; and I deem it but fair that the shareholders should have removed any impression which might have a tendency to undervalue their property, which, without dispute, is one of increasing prospect.—WILLIAM WILLIAMS: Fentino, May 3.

NORTH DOWNS.—"W. N." (Old Broad-street).—The quotation was according to a transaction on the Stock Exchange—an authority we take before all others, believing their prices to be the best criterion of the actual value of shares.

ST. MARINE TELEGRAPH.—SIR: I have just seen your Journal of the 22d April, and have read the article on submarine telegraphs with no small degree of surprise. Surely it must have emanated from some interested person, the "historical sketch" of its origin and progress being nothing more than a fabrication, the main aim of which is evidently to bring before the public the interesting and precocious "Young Engineer"—"whose attention hitherto had been chiefly directed to railways." &c. I should hope without the knowledge or sanction of the gentleman in question; for nothing can be more derogatory to the character of a man in his position than making such a claim for himself, well knowing it to be unfounded and untrue;—and, I may add, the consequences are but slightly different, if this effusion of some over-officious friend remains unnoticed and uncorrected by him. Should you not receive any such letter from Mr. Crampton before the publication of your next Journal, oblige me, as well as my submarine friends, by inserting this in the cause of truth.—J. P.: Paris, April 27.

WELSH POTASH MINING COMPANY.—In our last week's Journal we represented Mr. Louthouse, who recently visited and inspected these mines in company with Mr. T. W. Wilkinson, as the local manager; whereas he is a director of the company, and we understand the journey was taken by him solely at his own expense. We have no doubt, therefore, the shareholders will fully appreciate the services and liberality of Mr. Louthouse, notwithstanding the position in which we inadvertently placed him.

"H. and B." (Dublin).—The price of Trebarvah shares on the 22d April was 7½ to 9½, but circumstances may occur in a day to greatly depress any particular mine; or a few shares might be thrown on the market to be disposed of at any price, although we believe none could have been obtained at the sum mentioned.

NORTH BULLER MINE.—In answer to a correspondent in last week's Journal, we expressed our belief that it had been determined, at a private meeting, to abandon this undertaking, in consequence of a large shareholder refusing to pay his calls in arrears. We have since been informed that this was not precisely the position of the company's affairs, and that the mine is likely to be carried on successfully. The paragraph has, we understand, given annoyance to some interested parties; but, looking at the subjoined resolution, it will be seen that our informant was far from the truth, and that there is really very trifling cause for complaint:—"Resolved,—That (notwithstanding any special clause in the North Buller cost-book, depriving a relinquishing shareholder of all his interest in the machinery of the mine), inasmuch as Mr. Thomas King wishes to relinquish his shares, a valuation be made on his behalf by the value of the company by others; and that his share of the price agreed on by such two valuers be paid to Mr. Thomas King within one month of the valuation, less two years' discount at 5 per cent. per annum, and also his share of the liabilities incurred up to the last day of April, 1854 (which liabilities for this purpose shall be taken at 500 l.); and that, if such valuers shall fail to agree, the valuation be referred to a third person, to be chosen as umpire by such two valuers, and such umpire's valuation shall, in such case, be conclusive on Mr. T. King and the co-adventurers; and that Mr. T. King shall, on or before the 15th of May, 1854, finally give the secretary notice in writing of his intention to withdraw himself from all further liability and share in the undertaking."

DEVON CONSOLS NORTH.—"C. P." wishes to know whether this undertaking, priced in the Share List at 2s. 6d. a share, is still at work; and what are its prospects of becoming a successful adventure?

WHEAL LUDCOTT—WHEAL WAHY.—SIR: In reply to the remarks of "Argus" (of Liskeard), on the 11th inst., regarding the Wheal Ludcott and Wheal Wahy, I should say that the "Wish is father to the thought." I have not once heard that any such intention exists among the Wrey shareholders. Certainly, it would not be wise on their part, who have a large sett, with several well-defined lodes, and the lode now worked on affording the prospect of speedy and ample returns, to incur any liability on account of Wheal Ludcott. As "Argus" seems to complain of the management, I should recommend him to follow the example of the Wrey shareholders, and secure for his mine, if possible, equally good and honest management. He may be assured, that the chief prosperity of a mine depends on this.—A COUNTRY SHAREHOLDER: May 3.

MR. R. W. TOWNSEND proceeds next week to visit some of the mines in the west of Cork, and communications may be addressed, as before, to his offices, 2, Henrietta-street, Dublin.

CURRY UNITED MINES.—We have received several communications, in which the writers express their surprise that the report of Captain Samuel Richards, on the state of these mines, did not appear in our last Journal. We have only to say that we did not receive the report until Tuesday. Where the negligence lies it is not, perhaps, for us to offer an opinion, it being rather a question for the consideration of the shareholders and committee of management.

HALAMKING AND CROFT GOMTAL.—We have received a communication from Mr. R. B. Michell, the agent of this mine, relative to a Notice to Correspondents in last week's Journal, headed, "A Shareholder, Marazion," in which it is implied that 20 tons of coal were charged to the adventurers, which had never been received. Capt. Michell fully explains the transaction, which, instead of compromising his character, shows that he did everything in his power to save expense to the adventurers. The fact is, that in the latter part of March, 1853, the Aberdare and Gwyther Coal Company chartered the smack *Annasow* to carry the coals to Mary to take coals to Capt. John Vivian, at the Mount, for the company. When the vessel arrived there was much snow on the ground, and he discovered by the charter that he had only three days to discharge both, under a demurrage of 30s. and 20s. each respectively per day after that time. The agents declined to take them on such terms; but having received a letter from Mr. Pascoe, solicitor, Penzance, to avoid a lawsuit he took the coals; but the roads being impassable for days, he solicited his brother to take part, which were weighed to him, 19 tons 2 cwt., and the amount, 14 l. 10s. handed him by the clerk, which was paid on the 21st April, 1853, for which Capt. Michell gave credit. We have inspected the whole of the accounts since Capt. R. B. Michell has been in the company's service, which are plain and straightforward, and the sum above named duly entered, leaving at the end of June a balance due to Capt. Michell of 79 l. 17s. 3d. We have also seen the letter of Mr. Pascoe, and a copy of the one forwarded by Capt. Michell to Mr. Gostley, 75, Cornhill, with the accounts, and are satisfied that every transaction has been conducted in the most honourable manner; while we regret that any one should be found wicked enough to invent such a charge, or weak enough to believe it without proof, or that it should have found its way into our columns, such regret is greatly lessened from the fact of its having elicited so triumphant and convincing a reply.

POSTAGE OF NEWSPAPERS.—"W. J." (Glaston).—Our correspondent very justly complains that the enormous charge made on delivery of English newspapers prevents many who would otherwise subscribe to them from doing so. We have to inform him that the difficulty is to be overcome by ordering the paper through the post-office of the town in which he resides; the authorities will supply it, on payment of the quarterly subscription in advance, with the addition of, we believe, 10 per cent. commission, without further charge, being little more than 14. each Number for the postage. The same remarks may be acted upon for Denmark, and several other countries.

THE COMMERCIAL NEWSPAPER PRESS.

The publication by Government of the number of stamps issued to the respective Newspapers affords a fitting opportunity to acknowledge the very ample patronage we have received for our endeavours to make the MINING JOURNAL worthy of public support.

The steady progress in Circulation is the best evidence of appreciation; while the considerable increase of our Correspondents, in all parts of the world, shows that the interest in the objects to which the MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, is more particularly devoted is not confined to this country; and the repeated assurances of approval we receive, lead to the fair expectation that, as the same spirited and independent system of management is pursued, we may well rely on a continuous increase of our supporters and circulation.

The following list will show that the number published of the MINING JOURNAL surpasses that of the entire Railway press:—

Newspapers.	1851.	1852.	1853.
MINING JOURNAL.....	118,750	147,000	200,032
RAILWAY TIMES.....	86,530	81,000	88,300
HERAPATH'S JOURNAL.....	119,100	121,004	82,152
RAILWAY RECORD.....	28,300	25,500	19,475
RAILWAY GAZETTE.....	7,900	7,500	4,500
MINING JOURNAL.....	118,750	147,000	200,032

The other Commercial Newspapers may be thus classed,—also showing the circulation of the MINING JOURNAL to be considerably more than all of them put together:—

Newspapers.	1851.	1852.	1853.
LONDON COMMERCIAL RECORD	36,300	35,000	41,250
THE REPORTER.....	24,851	12,075	32,350
JOURNAL OF COMMERCE.....	23,000	21,000	27,500
LONDON MERCANTILE JOURNAL.....	17,500	19,300	15,500
THE MERCHANT.....	23,000	18,000	14,000
MINING JOURNAL.....	118,750	147,000	200,032

* * The MINING JOURNAL of this day is accompanied by a SUPPLEMENTAL SHEET, in which is published illustrated descriptions of Perkes's Gold Reduction and Amalgamating Machine—Moss's Crushing, Pulverising, and Amalgamating Machine—Mouat's Water-Raising Apparatus—Wright and Hyatt's Elliptic Rotatory Engine—Chase's Pulverising Machine for Gums, Sugars, and Resins.—Also, Reports of the Meetings of the Great Crinias Copper Mining Company; the Imperial Brazilian Mining Association; the Adelaide Land and Gold Company; and the Australasian Coal Mining Company.

We are compelled to postpone a valuable paper, by Mr. Joseph Holdsworth, on the Extension of our Coal-Fields; but which, with other matters on hand, we shall publish in a SUPPLEMENTAL SHEET with next week's Journal.

* * TAPPING'S PRIZE ESSAY ON THE COST-BOOK SYSTEM, enlarged and augmented, with Notes and an Appendix, can be had at the MINING JOURNAL office, 26, Fleet-street,—Price 5s.

Works published at the MINING JOURNAL office, 26, Fleet-street, London:

GEOLOGY AND MAGNETISM. BY EVAN HOPKINS. 16s.
GOLD ROCKS OF GREAT BRITAIN. BY JOHN CALVERT. 10s. 6d.
WINNING AND WORKING OF COLLIERIES. BY MATTHEW DUNN. 12s. 6d.
TABLES FOR PERSONS EMPLOYED IN MINES. BY W. M. WITTENBERG. 6s. 6d.
SUPPLY OF WATER IN SWANSEA. BY MICHAEL SCOTT. 10s.
PROGRESS OF MINING IN 1853. BY J. Y. WATSON, F.G.S. 1s.
STATISTICS OF THE MINING INTEREST FOR 1853. BY W. H. CULLE, ESQ. 6d.
GLOSSARY OF ENGLISH AND FOREIGN MINING AND SMELTING TERMS. 2s.
THE MINING GUIDE. 2s. 6d.
THE COST-BOOK—TAPPING'S PRIZE ESSAY. 6d.
THE COST-BOOK SYSTEM: ITS PRINCIPLES & PRACTICE EXPLAINED. 6d.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, MAY 6, 1854.

A case of importance to proprietors of collieries, and to operative coal miners, in reference to the relation of master and servant, was decided in the Court of Queen's Bench, on Monday. Two colliers, GEORGE BAILEY and JOHN COLLIER, who had been in the employment of Messrs. MARSHALL and CO., of Bedwelly, quitted their service, in consequence of a strike, on a dispute about wages. A complaint was then lodged by the agent of the employers, before GEORGE HUMPHREY, Esq., a magistrate of the county of Monmouth, and they were committed to the prison at Usk, to be kept at hard labour there for two calendar months, for leaving their service without the consent of their masters, and without lawful excuse. They were subsequently brought up under a writ of *habeas corpus*, before Mr. Justice ERLE, who liberated them upon their entering into their own recognizances to appear and submit to the judgment of the Court.

An application was now made on their behalf to discharge the recognizances, on the ground that the Justice had no jurisdiction, as it was not shown that the accused had entered into any contract of service, or had been guilty of any breach of contract; and it was also contended that the case did not come within the 11 and 12 Vic., c. 43, and that the warrant was bad, in not averring that the witnesses had been examined in their presence. The commitment set forth the complaint to the effect, that the defendants, on the 11th of Oct., 1853, did contract with the said Messrs. MARSHALL and CO., in the capacity of colliers, for the term of one month, and so on from month to month, determinable upon either party giving one month's notice, for the wages of 1s. 10d. per ton for cutting coal; that the said defendants afterwards entered into the said service under the said contract, and that they afterwards, before the said contract was complete, on the 7th of December, 1853, were guilty of misconduct in absenting themselves from their said service without the consent of their said masters, and without any lawful excuse. It then recited that the said defendants were, on this 10th day of December, 1853, duly convicted of the said offence, and the said Justice adjudged that they should be committed to the House of Correction, and held to hard labour, for two calendar months, and ordered their arrest and imprisonment accordingly. On the part of the men, it was insisted that they had not entered into any contract of service, but only that they should be paid for all the coal which they might cut at the rate of 1s. 10d. a ton; and further, that although they were bound not to work for any one else, they were not bound to work for Messrs. MARSHALL and CO. The application was resisted on the ground that there was sufficient evidence before the magistrate, from which he might infer that the accused had contracted, and authorities were cited to show that in a case like the present, under this peculiar Act, where a commitment did not purport to be also a conviction, it was not to be too strictly construed. The Court, consisting of Lord CAMPBELL, C.J., and Justices WIGHTMAN, ERLE, and CROMPTON, were unanimously of opinion that the warrant was sufficient. It appeared to have been made in execution of a preceding conviction, and, therefore, did not require all the strictness contended for. There might, indeed, be an instrument of a hybrid character, which was both a conviction and a commitment; but in this case there might have been a conviction setting out that the witnesses were examined in the presence of the defendants, and that all the requisites of the law had been complied with. The warrant was good upon the face of it, and showed that there was a contract of service within the 4th of GEORGE IV., c. 34. It was still open to the defendants to show that there was no evidence to bring the case within the jurisdiction of the magistrate, and, if it could be shown that there was no evidence to justify him in drawing the conclusion that there was a contract to serve, he would have exceeded his jurisdiction. They thought there was such evidence in this case; and, if there was a contract to serve, it was for the justice to determine whether there had been any breach of it. Mr. Justice ERLE added, that the effect of the judgment would be very important to those who had to administer the law. Magistrates had often been defeated by points of form which no one could foresee, but the tendency of the judgment would be to release them from the perils of such matters of form, and the application was accordingly refused.

It is the modern policy of our courts to simplify legal proceedings, and

relieve them as far as practicable from the technicalities which formerly too frequently prevailed. We solicit particular attention to this adjudication of the highest criminal tribunal in the country; it will teach operatives, before they engage in strikes, that they cannot expect impunity; it will instruct employers as to the evidence requisite to insure convictions; and it will be an unerring guide to magistrates, as to the simple and decided course which they ought, in such cases, to pursue.

An enquiry of an interesting and highly important character has originated from the Society of Arts, in order to investigate and ascertain the accidents, injuries, and diseases which attach to various bodily employments, and to devise means for prevention or relief. In the circular which has been issued, the committee justly observe, that the object is clearly for the advantage of both workman and master, producer, or consumer, "that ready help is confidently looked for from every class carrying on the plan of operations;" and co-operation is solicited in preparatory steps for holding, in the ensuing session, an exhibition of inventions and appliances of all kinds for making handicraft employment more healthy. Communications in reply to the printed questions emanating from the Society are, therefore, requested to be sent not later than the end of July next. It is also stated in the circular which has been printed, that it is desirable that the correspondents of the Society who shall supply information, besides giving their names, addresses, and profession or occupation, should mention any circumstance, tending to strengthen their testimony; and that where statements are made otherwise than on personal knowledge, the authority should be given.

The avowed object is highly philanthropic—namely, to ascertain whether there is any trade, or group of trades, urgently claiming a special thorough investigation, with a view of mitigating attendant physical evils; and whether any contrivances, or illustrations of contrivances for the above purpose, can be furnished to the exhibition, together with the details of a statistical nature, as to the number of cases, fatal or serious, which have occurred within the last three years in any department of industry. Medical evidence, as to the character of the injury or disease, the manner in which it was produced, its premonitory symptoms, and the treatment found most efficacious, would be considered particularly valuable in the reference to branches of trade recently introduced, or to the pernicious effects of which little attention has been hitherto paid. The committee are also anxious to test whether results good or indifferent have attended legislative enactments, and to consider what further parliamentary intervention might be desirable.

A synopsis of some of the physical evils which attach to various kinds of industrial labour is attached to the circular, in which, although embracing every operative class, we find the following, in reference to mining population, prominently put forward:—1. Injuries through defects of construction in scaffolding, vaulting, and shoring—through defects of protection against dangerous mechanical operations by hand-machinery or otherwise—e.g., unboxed machinery, splintering of masses, &c.; through explosions of steam, fire-damp, gas, gunpowder, and the like.—2. Chronic injuries to general health, or to particular organs of the body—through vitiation of air, over-crowding and non-ventilation of workplaces; through extreme temperature; through privation of daylight; and through the fatigue of excessive or untimely labour. Under the latter heads are necessarily included coal and other miners, and their children; and we have space quite sufficient to satisfy our numerous readers that the investigation thus set on foot by the Society involves enquiries of peculiar interest and importance. In directing attention to them, we lend our humble efforts to the amelioration and advancement of the human race, as we at least are unacquainted with any means so well calculated to promote that benevolent object as investigating the defects in our social system, and searching for and illustrating the most simple and salutary measures for its improvement. The conception reflects high honour on the enlightened and distinguished institution from which the proposal has emanated, and cannot in its results, fail to concentrate a mass of information which must, hereafter, prove invaluable to the enquiring and reflecting mind.

A pamphlet under the name of *The Indian Iron-Works, and their Prospects*, printed at the Bombay Education Society's press, has been transmitted to us direct from India. Our readers have been fully apprised that the demand for iron in India, already very large, having lately increased on account of the railways and other public works there, led to the formation of the East Indian Iron Company. The capacity of India to produce iron in any quantity, and the excellence of the material, had been long asserted, and it had also been worked by the natives in the aggregate to a considerable extent. The subject had attracted the attention of the Government, and of the parties interested in Indian railways, and the extension of the manufacture of native iron in the country had become an object of vast moment. The late Mr. HEATH, a gentleman formerly in the service of the East India Company, and who has left behind him a high reputation for his well-known improvements in the manufacture of steel, had selected a place, called Porto Novo, for iron-works, where an association was formed, under the title of the "Indian Iron, Steel, and Chrome Ore Company," by whom extensive machinery was erected to suit its requirements, but this has ceased to exist. The new company has been formed for the purpose of purchasing from the former iron company of Madras their property, rights, and privileges; and it obtained from her MAJESTY'S Government a Charter of Incorporation, with limited liability, and from the East India Company a renewal, for a period of 10 years, of the valuable lease and privileges held by the original company.

The properties thus secured comprised extensive tracts of mines and forests, acquired from native landholders, in addition to the lease from the East India Company of the mineral grounds in the districts of Salem, Malabar, Canara, Coimbatore, and South Arcot; and the company have now two establishments at work at Porto Novo and Beypoor, both favourably circumstanced on the coast at the mouths of navigable rivers. The Malabar Railway, in progress of construction, which is to have its terminus contiguous to the Beypoor works, furnishes vast prospective advantages for the transport of materials and produce. It might have been fairly anticipated that such an establishment, with native labour under English superintendence, with an organised staff of well-selected European workmen, would have fully realised to its proprietors the most flattering promises of its prospects. That prospectus, issued at Bombay, stated that the Government at the Madras Presidency had been frequently supplied with bar-iron and castings from the Porto Novo works; and having lately recommended to the Court of Directors of the East India Company that the Indian Iron Company should be employed for the supply of the Madras Railway, the Court expressed its assent, naming a price according to the state of the English market, and of freights which could not fail to yield a remunerating profit on the manufacture. The exposition of the present position and prospects of the company, published in India on the 6th of February last, showing the importance of the undertaking both to Great Britain and India, seemed to invest it with a national character, and to encourage strong hopes that capital and efficient management were alone required to render it a great and prosperous concern. The company, to which full powers are reserved for enlarging their capital to one million sterling, having determined on an extension by an issue of 20,000 new shares of 10 l. each, the present pamphlet has been published, with the avowed design of assailing and defeating the project. It is impossible to deny to the writer great earnestness of purpose, and considerable energy and ability. His reasoning is, however, to a great extent, based upon the unprofitable operations of the former company; a ground which, if it were permitted to prevail in determining enterprise, would, we fear, have prevented the extension and revival of many great undertakings which, although at first unpromising, have ultimately proved highly valuable. If fuel has not as yet been supplied in quantity and quality such as would enable British India to rival the iron manufacture at home, it by no means follows that in the vast dependencies under our dominion in the East coal may not yet be found sufficient to meet the most extensive requirements. The writer assumes that the native iron of India, from its extreme liability to fracture, renders castings almost useless, disadvantages which he assumes are accidental, but are owing to the inherent properties of the original materials. This failure he admits "is not to be wondered at, when it is considered that all ironmasters in England and Wales are well aware that ores from different localities give each a completely different quality of iron, and that every casting requires a greater or less quantity of these different qualities to render it suitable for the purpose for which it may be intended." Has it never struck the writer of this pamphlet that the iron manufacture in India is in its infancy, as compared with that of this country; and that if the article hitherto produced has been defective

the sameness of the quality used, one of the different requisite descriptions may yet be found in India, whose combination would produce the desired result.

Without entering into the motives which have influenced the writer in question, and admitting the possible correctness of some of his objections, we cannot altogether approve of the spirit which actuates his hostility to this company, now appealing to the Indian public for support. There may have been, and there probably was, mismanagement in the previous operations; the results may have grievously disappointed ardent expectations, but have not similar consequences frequently occurred at home? Being ourselves anxious for the introduction and extension of European enterprise in the East, we have deemed it our duty to allude to the present publication; it is anonymous; its author may not be disinterested; and if its animadversions were allowed to circulate unnoticed, a considerable time might, perhaps, elapse before they could be answered or refuted, from the very remote quarter in which correct and satisfactory information can alone be obtained.

A meeting of shareholders in the Royal Hibernian Mining Company was held on Wednesday, at which a lengthened report from the committee was submitted. Inasmuch as an amendment was carried deferring the adoption of the report, it may appear that there was a disagreement between the directors and other shareholders, but the only object in delaying the acceptance of that document was to avoid incurring a great expense in purchasing one of the gold-crushing machines until they are thoroughly tested by other companies, in consequence of the great discrepancies that have occurred upon reducing large quantities. We understand Dr. COLLIER has agreed to operate upon 10 tons of the stuff at Ipswich immediately his machine is in working order.

The newly-corrected and greatly enlarged edition of *Ure's Dictionary of Arts, Manufactures, and Mines*, containing a clear exposition of their principles and practice, and illustrated with nearly 1600 engravings on wood, is evidently a work of vast labour and research. The author informs us that the task which he had undertaken was to describe and explain the transformations of the several primary productions comprised within the above extended sphere by mechanical and chemical agencies into general objects of exchangeable value. While a very comprehensive portion of the work is devoted to the elucidation of the labours of the miner and metallurgist, and some important articles are introduced applicable to those of the mechanical engineer, we are assured by the writer that he has been repeatedly consulted by proprietors of factories as well as mines, both in this country and abroad, concerning derangements in their operations, or defects in their products; and in his present elaborate publication he has availed himself of the stores of information thus acquired, but has not neglected any means of procuring knowledge afforded by an extensive intercourse with foreign nations. Numerous tours through the factory districts of Great Britain, France, Belgium, Germany, and Switzerland had opened fresh sources to him, and he conceives that he has been enabled to describe several curious processes hitherto veiled in mystery. The varied novelties first displayed at the Great Exhibition of the Industry of All Nations are here described, and he acknowledges that in the mechanical department he has received valuable contributions from the two distinguished engineer brothers, Messrs. WILLIAM and PETER FAIRBAIN. Of the former gentleman, Dr. Ure observes that "his bridges across the Conway River and the Sea Straits of Menai are such stupendous and marvellous creations of engineering enterprise, as have cast all former mechanical exploits into the shade;" and the public must feel that contributions from such a source would confer a distinguished character on a publication of even higher pretensions than the present.

We have carefully examined those portions of the Dictionary which comprise the treatises on mining, mines, &c., and we can safely tender our attestation that they have been prepared with care and accuracy, while the neat and elegant illustrations which accompany them must tend to render them peculiarly valuable as sources of instruction. The article "Coal" was supplied by a gentleman of high chemical knowledge (Mr. LEWIS THOMPSON); and we quite concur in the opinion expressed by the writer "that an accurate, systematic, and intelligible report upon the calorific properties of coal has long been needed by the manufacturing and mercantile interests of this country." The first report of the commissioners, appointed at the instance of the Board of Admiralty, to enquire into the coals suited for the steam navy of Great Britain, is treated in the following strong terms of condemnation:—"That a more garbled, more inaccurate, and less impartial job was never exhibited—nay, not even in the House of Commons." We had ourselves, on its first appearance, compared both its plan, its arrangements, and its details with that which was prepared for a similar purpose in the United States; and while the one was the production of a single individual, Prof. JOHNSON, and the other the result of the combined wisdom of Sir HENRY DE LA BECHE, and a college of philosophers, we did not hesitate to give the preference to the former for simplicity and practical utility. The writer of the article on "Coal," in this Dictionary, very properly exposes a curious attempt made at page 13 of the Putney Report, to prove that the evaporative value of a bituminous coal is expressed by the evaporative value of its coke; while the table relied on proves the very reverse of the position attempted to be established, and actually shows that the evaporative power of a bituminous coal is immensely greater than that of coke, indeed almost double, and that the volatile ingredients of coal evolve in burning relatively a much greater proportion of heat than the fixed constituents. After arranging the experiments, the writer observes—"That to attach any value to such experiments, or to the conclusions drawn from them, is a mere fallacy, and as the whole of the theoretical part is based upon fallacious analyses, with them it must fall to the ground as erroneous and illusory." The article further remarks, that as it is possible that the Admiralty may really be serious in its desire to ascertain the true value of steam coal, he would venture to suggest that the proximate value of each coal should be determined by actual experiment, and for that purpose that intelligent miners should be selected, practically acquainted with the different modes of firing necessary for anthracite, open burning, and bituminous or coking coal. Concurring as we do in this view, we would ourselves recommend that advantage should be taken of our splendid steam fleet at present engaged in active operations in the Baltic, to ascertain, by unerring trials, the relative value, for steam purposes, of the several coals of the British Isles, and thus the Board of Admiralty may be enabled, while officially conferring a material benefit on the service and the State, to settle the disputed capabilities in economic power of the different qualities of fossil fuel.

We cannot, however, permit a singular oversight in the article on "Coal" to pass without observation, for although the subject is so very important, the writer has confined his remarks to the first report alone, and has unaccountably passed over, or indeed appears to have been altogether ignorant of that which was followed by two subsequent reports on other coal districts of England. Such an omission in a work of this nature is highly reprehensible; but, as an apology for the absence from his text of all allusion to the later reports, he has specially noticed them where they were least to be expected, and are entirely misplaced—in the preface. Upon a review of the entire, Dr. Ure comes to this conclusion—that, "taken as a whole, the only honest inference that can be drawn from the three reports is, that the question sought to be solved by the Admiralty coal investigation remains exactly where it was, for all practical purposes; the analyses, whether proximate, ultimate, or lithargic, together with the boiler experiments, being in all senses of the expression null, void, and of no effect of value whatever."

Although we have deemed it part of our critical duty to reflect upon this singular miscarriage, we are bound to concede that the vast mass of information contained in this work, selected from the best sources, and arranged with systematic attention, while it excites our surprise, entitles the author to the highest praise. Forming an invaluable compendium of knowledge on every branch of practical art, with the modern improvements brought down to the most recent periods, it furnishes in itself a perfect library of scientific information for the miner, mechanic, and manufacturer. It is a publication embracing and illustrating every subject, suited to every class and capacity, and which ought to be found upon the table of every industrial and commercial establishment. "All knowledge is useful," is an aphorism which cannot be too strongly impressed upon the growing youth of the country; and while we feel that perfection can never be expected in any human undertaking, we fearlessly assert that no work has ever issued from the press a publication so completely fitted to lead to a realisation of that maxim, as the *Dictionary of Arts, Manufactures, and Mines*, now presented by Dr. Ure to the British public.

THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

(FROM OUR CORRESPONDENT IN BIRMINGHAM.)

MAY 4.—All the accounts which have reached me from the district since my last letter are satisfactory. The Iron Trade continues in an active state; orders are daily arriving, and no probability of a decrease. For pigs the demand is excessive, and many of the works are represented as being deficient of an adequate supply, at an advance of price. In the malleable iron-works the manufacturers are using cinder-pigs to a considerable extent, and the high price now being charged for pig-iron is a matter of no small complaint amongst those more immediately interested in the trade. The number of furnaces in blast in South Staffordshire is estimated at nearly 130, the produce of which ought, under ordinary circumstances of demand, to be sufficient, but which is now reported to be inadequate.

In the Metal Trade no material change has taken place. The prices of copper and tin are firm, and likely to be well sustained.

The Coal Trade continues exceedingly brisk, and a further step for its development was taken this week. The proprietors of the South Staffordshire Railway met here on Tuesday, and after an interesting discussion, resolved, under the Warcliff order, on giving their assent to the bill now before Parliament, for making a new branch line through the coal fields of Cannock and Sutton, thereby affording additional facilities for developing the immense mineral resources of the district.

In connection with the meetings of the week, that of the Mechanical Engineers, held yesterday, at the board-room in Newhall-street, was amongst the most interesting to your readers. Mr. A. Slate, of Dudley, presided. Amongst others present were Wm. Matthews, Esq., Samuel Thornton, Esq., and Messrs. Bird, E. Power, J. E. Payne, W. Griffiths, E. Elwell, J. Ross, W. England, G. Addenbrooke, H. Morgan, J. Cochran, J. Darwin, J. Brown, R. Williams, W. Middleton, W. Barnes, D. Joy, W. Williams, jun., George Thompson, J. H. Hodgkin, G. A. Everitt, W. S. Garland, Thomas Walker, Henry Clayton, Josh. Wright, T. Chillingworth, J. Jobson, H. Aidken, J. Newman, &c. There were five valuable papers for discussion. The first read was one by Mr. E. Payne, of Birmingham, on Bird's Railway Train Signal, and from which it appeared that the object of the inventor has been to secure an effectual means of communication between the drivers and guards of railway trains. The principle upon which the invention is founded is hydraulic pressure, the fluid employed being an anti-freezing mixture, consisting simply of alcohol and water. The mechanism is enclosed in two cases, one placed upon the tender of the train, the other in the guard's van, each being furnished with a signal board, containing the same code of signals. The instrument exhibited contained 450 feet of gutta percha tubing, coiled on a drum in the case designed for the guard's van, and having been extended around the room, and attached to the case intended for the driver, it was found to work as follows:—The guard, requiring the driver to stop, raises a lever until the index points to the word "stop," the fluid is forced along the tubing, and depresses the piston in the opposite instrument, forcing down with it a rack signal board; the gong is struck, and the word "stop" appears in the slot of the box. The driver then shuts off the steam, and raises his lever until the word "yes" appears in the slot, thus returning the signal to the guard; and should he fail, the guard again signals him to "return signal." Various other signals can be given in the same way, and a certain communication thus kept up throughout the entire journey, or only when rendered necessary by the approach of danger. In answer to questions by the chairman, Mr. Bird, and another person who had witnessed experiments with the instrument the day before, on the Stour Valley line, between Birmingham and Wolverhampton, assured the society that the guard and driver were signalled throughout the journey with the utmost possible ease and precision, the instruments not failing in any one instance. Mr. W. Matthews observed, that it was an invention of considerable merit, and he had no doubt that railway companies would be induced to adopt it upon their lines in some way or other. The ingenuity of the invention was admitted by all present, and its applicability having been satisfactorily proved by Mr. Bird, the sense of the meeting was expressed in a most unanimous vote of thanks to that gentleman, accompanied by an expression of desire, on the part of the chairman, that he would communicate the result of further experiments to the society.—The second paper was by Mr. William England, of Dudley, on an invention having for its object to secure perfect safety in ascending and descending mine shafts, and thereby prevent a recurrence of accidents arising from the breaking of machinery, and running off chains and ropes. Mr. Matthews and Mr. Thompson, who are extensively engaged in mining operations, although admitting the merits of the model, questioned its applicability and security.—Mr. Jobson, of Dudley, presented models in elucidation of a paper on an Improved Construction of Moulds for Metal Castings, by which the process of moulding is rendered simple and easy, combined with economy. The moulds are of plaster of Paris, or other substances of a similar kind, and the advantages of the new plan are felt most in cases where a large number of castings have to be made from the same patterns; also where intricate forms of the patterns (as in foliage or ornamental castings) makes it difficult to draw from the sand in the ordinary process of moulding, and the irregular surface of the "parting," or separation between the moulds, increases the difficulty of making a clear casting. In this new process of moulding, after the patterns have been first partially embedded in the sand of the bottom box, and the parting surface accurately formed, the top box is placed on, and is filled with plaster of Paris, or similar material, to which the pattern itself adheres; when the plaster is set, the boxes are turned over, the sand taken out of the bottom box, and a similar process repeated with it.—A very valuable paper by Mr. Ramsbottom, on an Improved Piston, was next read; and one by Mr. A. Slate, on a Water Filterer, closed the business of the day.

IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

(FROM OUR CORRESPONDENT IN DONCASTER.)

MAY 5.—The accounts of the Iron Trade from the principal works in these counties during the week have been of a most satisfactory character. The demand is very great, and prices are as firm and regular, and business operations generally are as prosperous as we have reported them for some time past. In proof of this, it may be stated that several new furnaces are being erected; and others that have been cold for years are now in full blast. Messrs. Samuel Beal and Co., of the Parkgate Works, near Rotherham, which are supposed to be the largest in Yorkshire, have just put a furnace in blast in the Holmes, which has not been worked for a long series of years; and Mr. Gench, one of the partners in the same firm, is erecting four furnaces in the Cleveland district—two of which are expected to be completed at Midsummer. For several weeks past, the shipments and local consumption of Scotch pig have been very much in excess of the "make," in consequence of which stocks have been very materially reduced. If this brisk demand continues, there is every probability that the present high prices will be easily maintained. The demand for plates used in shipbuilding, and for iron for railway purposes, is exceedingly active.

The shareholders in the Eyam Mining Company held their seventh annual meeting on the 23rd April—[the particulars of which are given in our City Article.]

The extensive mining operations now being carried on in the mineral liberties of Hassop, Calver, Rowland, and Ashford, is naturally attracting considerable interest and attention. Incidents occur almost daily in these districts, and in the vicinity of Eyam, which tend to prove the oft-repeated opinions of many scientific men, as to the valuable mineral wealth of North Derbyshire. The Enterprise Mine, in this district, has only been discovered a few months. It is a lead mine, having a day level at the foot of an immense mountain. The level has a beautiful asher arch at the entrance, and was only driven a few fathoms before a rich discovery was made, and it is now pretty generally believed that the distinguishing feature of the Enterprise ore is, that a large portion of silver is contained therein. The shares are principally owned by Mr. Burgoyne, of Eyam; Mr. Broomhead, of Calver; Mr. Bray, the eminent railway contractor, of Moor Park; and Mr. Bentley, of Stoney Middleton. The ore is of a nature entirely different to any other found in Derbyshire, and is now being sent off to London, to be assayed. A second level, similar to the first, has recently been commenced at the Enterprise Mine, at the base of a mountain, separated from the other by a narrow valley, the arch only having been completed last week. On Friday afternoon last the miners, who were working by the light of day from the mouth of the level, discovered a vein with a fine lode of lead ore.

The Steel Trade is remarkably buoyant; there are plenty of orders on the books that will take considerable time to execute. Some firms, who

have been largely engaged in commercial transactions with Russian ports, have felt a slight depression, in consequence of the closing of trading operations with that country, but the effect is expected to be only of a temporary character.

The Coal Trade is very active, and much business is doing. The demand is steady, and prices somewhat firm for this season of the year. Although the rates have not been reduced since our last, our coalmasters are now giving a greater quantity to the cargo for breakage, &c., than they did a short time ago, which is, indirectly, a nominal reduction. We hear complaints from all parts of the country of the want of providence among the men. If they would study their own interests, and those of their employers, they would soon see the inutility of neglecting their work as long and as often as many of them do.

The Brass and Copper Trades are brisk, and all hands fully employed. To-day the local share market opened with much firmness, but in the latter part of the day apprehensions were entertained that the Bank rate of interest would be reduced, and prices receded a little, in some cases 1 per cent. A rumour was in circulation that a new French loan was in contemplation, and this tended to make the markets more heavy; but on the interest being taken up without any charge, a slight reaction took place.

IMPORTANT MEETING OF THE COALOWNERS AND MINING ENGINEERS OF GREAT BRITAIN, IN RELATION TO THE ACCIDENTS IN MINES.

It affords us peculiar gratification to be able to communicate to our readers a brief outline of the proceedings of a meeting assembled for the express purpose of promoting the increased safety of the miners, and to diminish by all possible means the great destruction of human life which now so lamentably prevails in our collieries. The time and space we have devoted for many years to the discussion of this momentous question, sufficiently attest the depth of our convictions, as well as the sincerity of our motives, for the course we have pursued; and it is, therefore, with undisguised pleasure that we witness such an evidence of the utility of our labours as this meeting exhibits. We have never disguised from ourselves, or our readers, that legislation upon this subject is attended with considerable difficulty; but we have contended that these difficulties were not insuperable; and that with a resolute purpose to do all that can be done to remedy the evils so justly complained of, very much may be done to accomplish so desirable an object, so as to increase the safety of the men, without unjustly or unfairly trenching upon the interests of the owners. The time has, we trust, gone past when the lives of men are considered of less importance than a profitable return for the capital invested; but we fear there still remains in some districts a notion that the question is merely a commercial one, and that the dictates of humanity ought to influence legislation in this matter only so far as may be consistent with the success of the enterprise. The sooner such barbarous ideas, if any such are still entertained, are relinquished the better; for it is monstrous to suppose that such a state of things can be tolerated. If a mine cannot be worked with safety, it ought not to be worked at all. Profits must not be purchased at the expense of human blood; and the country will be greatly disappointed if, in the proposed legislative measures, the safety of the workmen be not recognised as the chief and primary consideration. We have stated our views thus broadly, not as an imputation on any one who took part in these discussions, for no such principles were avowed; but to place the subject in so strong a light that our views may be unmistakably understood, and that the decisions which may be ultimately arrived at on the several subjects embraced in the discussions, both in the country and in London, may be based on the principles of justice and enlightened humanity.

With these few prefatory remarks, we shall proceed to give such information as we have been able to obtain, which, though somewhat limited in extent, contains a fair digest of what occupied the attention of the meeting. We may mention, that the offer we made to send our reporter to all the sittings of the congress was respectfully declined, for reasons in which we concurred, and that we are indebted to a gentleman who was present at the whole discussion for the following abstract of the proceedings. The congress was held in consequence of a circular which had been issued from the Coal Trade Office, Newcastle-upon-Tyne, dated the 26th March, 1854, and addressed to the principal coalowners and mining engineers in the country, requesting them to convene an early meeting of the "trade" in their several districts, and to submit to such meetings four resolutions, which had been passed at a general meeting of the Coal Trade of Durham and Northumberland, to the effect, "that it was desirable to bring under the consideration of the Committee of the House of Commons now sitting, a code of regulations for the inspection of mines, so constructed as to be applicable to the mining districts of the country generally. That to carry out this object, deputations from each district were solicited to assemble in London on the 25th April, and the four following days, for the purpose of endeavouring to construct a general and comprehensive code of inspection." The Government inspectors, and deputations from the working men, were also solicited to attend. In consequence of this circular, a large and influential meeting took place on Tuesday morning, the 25th ult., at Morley's Hotel, Charing-cross. Owing to insufficient accommodation, the place of meeting was subsequently changed to the Craven Hotel, Strand. Gentlemen from the several districts named were in attendance, most of whom took part in the discussions.

Mr. NICHOLAS WOOD, of Hutton Hall, in the county of Durham, was unanimously elected chairman, and opened the business of the conference in a long and lucid speech, in which he stated that these proceedings had arisen in consequence of a recommendation of the Committee of the House of Commons, that the parties interested in the management of coal mines throughout the kingdom should meet, and endeavour to agree in recommending some practical code of regulations, suited to the varied circumstances of the collieries in all the districts of the country, and which code might afterwards be embodied in an Act of Parliament, having for its object the prevention of accidents in mines. The prominence which this subject had obtained in the public press, in the Houses of Parliament, and in public opinion, rendered its immediate and full consideration imperative on the owners and engineers engaged in the trade; and unless some fair and reasonable measures were proposed by this meeting, he feared that other measures, much less palatable, would be forced upon them. The committee of the Coal Trade of Durham and Northumberland had taken the initiative in these proceedings, in consequence of communications which had been received by some of its members from Mr. Hutchens, the chairman of the Committee of the House of Commons; and the coal-trade committee of the north, after mature consideration, and much discussion, had deemed it expedient not only to entertain the question, but to adopt a general code of rules and regulations, which, subject to some minor modifications, was thought to be applicable to all the collieries in Durham and Northumberland. He now submitted this code to the serious consideration of this meeting, and it was for the gentlemen present to discuss and determine how far this code was suitable to the exigencies of the mines in their several districts, and to propose such alterations, omissions, or additions, as they might think more adapted to the peculiar circumstances of their collieries. In arriving at a decision upon this important subject, he anticipated they would derive considerable benefit from the assistance and suggestions of the Government Inspectors, and of deputations from the working men who had been invited to attend, and who, he understood, had arrived in town for this purpose. The chairman then entered into the mode with which he proposed to conduct the proceedings, and concluded a long and interesting speech, of which the above is a brief outline, by thanking the meeting for the honour they had conferred upon him by unanimously electing him to preside over their deliberations, and for the attention with which they had listened to the suggestions he had submitted to them.

Printed copies of the Northumberland and Durham "Rules and regulations for the safety of coal mines, and of the workmen employed therein," were then distributed among the gentlemen present, and an animated discussion ensued on the proposition that all collieries should have rules. This was ultimately decided in the affirmative, but with the understanding that the meeting was not pledged to the precise words of the resolution, and that the subject was open to re-discussion. It was then arranged that the meeting should be adjourned until Thursday morning at 10 o'clock, when the Government Inspectors and the deputies of the working miners should be invited to attend.

The meeting met according to adjournment on Thursday, when there was a much larger attendance of gentlemen from the several mining districts than on Tuesday. The minutes of the preceding sitting of the conference were read, and after considerable discussion were, with some verbal alterations, confirmed. The Government Inspectors were then intro-

duced, and informed by the chairman, that the object the meeting had in view, in requesting their attendance, was to solicit from them such information as they had derived from the inspection of the mines in their several districts, and the meeting would be obliged if they would submit to it any suggestions for the improvement of the law, and unite with those present in an open and friendly discussion of any topic connected with the prevention of accidents in mines which might incidentally arise, or which might be suggested by themselves or by any other gentleman. A somewhat desultory conversation then ensued, which resulted in the Inspectors stating that they should be happy to listen to the proceedings of the meeting, and to give their best consideration to any resolutions the meeting might decide upon; but that, as they were employed by the Crown, it was their duty not to communicate their views and suggestions to this meeting, but to the Secretary of State for the Home Department. This determination was received with undignified astonishment by the meeting, and it was unanimously resolved that the Inspectors should be relieved from further attendance. On their leaving the room, the chairman submitted to their consideration the propriety of consulting the Secretary of State, on the subject, and it was generally understood that such was their intention.

The deputation from the colliers were then introduced, which consisted of Mr. Martin Jude and Mr. Gray, for Northumberland and Durham, and Mr. Swallow and another for Cheshire and Lancashire.

The CHAIRMAN addressed the deputation, soliciting their assistance to promote the object the meeting had in view, and inviting a free and unreserved communication of their opinions, and the wishes of the men as to legislative measures for the prevention of accidents, assuring them that any proposals they might submit to the meeting should have its serious attention.

Mr. MARTIN JUDE then stated that he appeared at the meeting as one of the representatives of the working men engaged in the collieries of Northumberland and Durham, and on their behalf he begged to thank the gentlemen present for inviting them to attend this meeting, as, from what the chairman had just said, he could not doubt but that great good would result from it. The views of the working men in his district were so well embodied in a petition to Parliament, now in the course of signature, and which had been signed by 3000 men, that he begged to submit it to the meeting for consideration, in the hope that the several remedies therein proposed for the existing grievances of the men would meet with the concurrence of the gentlemen present.

Mr. SWALLOW said that the men in his district had also prepared a petition to Parliament, which had been very numerously signed, and which was substantially the same as that of Northumberland. The men in Scotland had also prepared a similar petition, but with a clause for the limitation of the hours of labour, with which he and his constituents did not agree, and which he did not expect this meeting would entertain. He begged to give in the petition from the miners of Lancashire and Cheshire, which embraced the chief points that the men in his district thought required attention, with the view of obtaining such legislative measures as would remedy the evils of which the miners so justly complained.

The petitions to Parliament were then read by the chairman, and full explanations were given by the deputies, as to the opinions and views of the men, as each successive clause was read. Many of the suggestions made by them were very valuable, and were received by the meeting with every possible respect. The general intelligence, undoubted talent, and the moderate and conciliatory spirit displayed by the deputies, excited general admiration and esteem, and went far to establish that cordiality of feeling between the representatives of the men and of their masters, which so eminently prevailed during this and a subsequent interview.

In thanking them for their attendance, the CHAIRMAN expressed the great pleasure and satisfaction he and all present had derived from the way in which the interview had been conducted by the deputies, and that they might rest assured that their communications should receive the fullest consideration of the meeting. After these deliberations had taken place, the result would be communicated to them, and, if not inconvenient to them, the meeting would desire another interview.—To this the deputation assented, and Mr. SWALLOW, on behalf of his colleagues, expressed their thanks for the kindness with which they had been received, and for the great attention which had been paid to their suggestions. The meeting was then adjourned until the following morning.

Friday was devoted to a discussion on the several topics mentioned in the petitions of the working men. With two or three exceptions, and some modifications, the recommendations in the petitions met with the concurrence of the meeting, and resolutions to that effect were passed. But as these and other resolutions are to be submitted to the district meetings shortly to be held, for their approval or dissent, the publication of them now is thought to be premature.

It was determined that after the meeting on Saturday, there should be an adjournment until the 23d May, and that, in the meantime, the representatives present should convene local meetings of their several districts, and submit the minutes of this meeting's proceedings to such district meetings, and obtain their concurrence or dissent to what has been done, which is to be reported to the adjourned conference on the 23d May.

It was thought desirable that an interview should be had with the Chairman of the Committee of the House of Commons, in relation to the Inspectors, and Mr. Wood was requested to wait on Mr. Hutchins with the object contemplated. The meeting was then adjourned.

On Saturday morning, Mr. H. S. TREMENEER, the commissioner appointed under Lord Ashley's Act, attended, and submitted his proposed bill for the education of boys employed in collieries to the meeting. The chief points are that all boys of from 10 to 14 years of age should not be employed in mines unless they produced certificates of having attended school 150 hours in six months, and that managers employing uncertificated boys are to be subject to certain penalties. Proper schoolmasters are to be provided, and are not to charge more than 1s. for every 30 hours a boy may attend. Considerable discussion ensued, in which the inspectors and deputies of the working men took part. The prevailing opinion appeared to be, that the charge of 1s. for 30 hours' attendance at school was too high, as, when a man had three or four sons, such a charge would not only constitute a heavy tax, and exceed the cost of education under the present system, but would also be a direct inducement not to send the boys to school for more than the minimum amount of hours required.

Mr. SWALLOW thought there was much that was good in the bill, but was of opinion that, as it did not extend the age from 10 to 12, at which boys were to be admitted into a mine, it would not produce all the benefits which were anticipated. For the many hours the boys were daily in the pit, they were too much tired and exhausted to benefit by instruction.

Mr. TREMENEER replied at considerable length, and contended that the objections urged against the bill would, he believed, be found on experience to be ill-founded. He then went into considerable detail in support of this opinion, and concluded with the expression of his acknowledgements for the opportunity of explaining his views on this important question which had thus been given him.

The thanks of the meeting were unanimously given to Mr. Tremeneer for the lucid exposition of his measure with which he had favoured the conference; but no resolution was passed in relation to the bill.

The Inspectors, having been requested by the Home Office to give a full exposition of their views and opinions, attended to day, when Messrs. Dunn, Morton, Mackworth, Dickinson, Wynne, and Williams, made several communications, in which there was obviously a want of unanimity, but they contained much of great practical value. As however they, with the exception of Mr. Dunn, wished that their communications should not be published, or submitted to the district meetings, we refrain from giving their suggestions or opinions the currency of our columns, although we are inclined to doubt the wisdom of their decision. The several subjects submitted by them to the meeting underwent considerable discussion, and had a beneficial influence on the meeting.

On the retirement of the Inspectors, the deputies of the working men were received, and the result of the discussion on the petitions was communicated to them by the chairman; when Messrs. JUDE and SWALLOW expressed the great satisfaction they felt at so general a concurrence with the opinions expressed in the petitions, and that those matters wherein the meeting differed were of subordinate importance. They again expressed their gratitude for the kindness and condescension with which they had been received, and for the great attention which had been paid to their suggestions.

Mr. GRAY said, he begged to add a few words to what had been expressed by his able colleague, Mr. Jude, and to state that there was a prevalent feeling among the men in the north of England that the masters cared nothing about them; but, from what he had heard and seen in that room, he was convinced this was a great mistake, and on his return he would do all in his power to convince the men that they were in error, of which he could not give them a better or more convincing proof than the reception which had been given to his friends and himself, and to the suggestions they had submitted to the meeting. He again begged to thank the gentlemen present for their kindness, and to assure them he would never forget it. The deputation then withdrew.

After discussing some matters in relation to the future proceedings, the cordial thanks of the meeting were given to the chairman, whose urbane and able conduct in the chair had tended so much to the satisfactory and comparatively successful result of the meeting, to which he briefly and feelingly replied, amid reiterated applause. The meeting was adjourned until the 23d instant.

THE CRYSTAL PALACE AT SYDENHAM.

As the time rapidly approaches for throwing open to the public the gorgeous displays of nature and art deposited in a building which in itself may be considered a wonder among all the wonders of the 19th century, increasing public interest is very naturally excited. In addition to the high gratification and edifying amusement which all classes will receive in visiting this paradise of science, with its parks, gardens, conservatories, fountains, and lakes, unsurpassed in beauty, and unequalled in instructive utility, it is with much satisfaction we find that the executive committee have still higher views, and have determined systematically to establish a great educational principle, by exhibiting, in connection with simple natural products, illustrative specimens of the various processes through which they pass, until they are converted into the most finished articles of utility or art. Thus, circulars have been sent to the managers of various mines, in which it is stated that it is intended to exhibit in the MINERAL SECTION specimens of the mining produce of Great Britain and Ireland, and requesting to know if samples of ores will be furnished, and how soon. For the objects of the collection it is important that they should be of the average quality, accompanied by any information which can be given as to the details of working the mines, the produce, markets, &c.; and, where the opportunity offers, by specimens remarkable for their beauty, richness, or peculiar mineralogical features. This section, forming part of the Raw Produce Department, under the direction of Prof. Wilson, will be superintended by Dr. Price, and in connection with these products will be exhibited specimens, the result of each metallurgical process through which they pass, as smelting, puddling, rolling, refining, casting, forging, turning, filing, and polishing, through every stage of manufacture, until are perfected the highest productions of art, and the finest specimens of useful works in the wares of Sheffield and Birmingham. We have no doubt but that all parties connected with mining property will readily aid in this movement, and we hope such a collection of minerals will be accumulated as will serve to convey at a glance a better idea of the vast extent and value of our metalliferous produce than can be obtained from any other source. Such an exhibition will impress the young, as well as older enquiring minds with many great truths connected with geological research, and the bountiful provisions of Nature in supplying human requirements; while it will be of great advantage to mining companies and owners of valuable mineral ground, in enabling a judgment to be formed, in the space of one department of the palace, of the character and value of the produce of every mineral district in the kingdom.

IRON ORE MINING IN THE FOREST OF DEAN.—A case was recently brought before the Monmouth County Court, in which Mr. Robert Muahet was plaintiff, and a Mr. W. James defendant, of considerable importance to all persons holding the privileges of what is termed "free miners," in the Forest of Dean, Gloucestershire. Both parties were free miners, and resided in the vicinity, and the action was brought to recover a sum of money alleged to be due to the plaintiff for iron ore, which defendant had raised and sold from a galeage claimed by plaintiff. Defendant held a stone quarry under Government, and plaintiff, it was stated, was entitled also by a Government award to all the iron ore existing over an extensive area, which included defendant's quarry. It was alleged that defendant had worked the quarry for ironstone, instead of stone only, and had sold a large quantity, contrary to the forest regulations. Although the action was brought for debt, the case involved a point of right. The coroner's award to the plaintiff was put in and proved by Mr. Thomas Graham, who said that separate awards were always given for stone and iron ore. Mr. Pearson, for plaintiff, read portions of this award; it showed that Mr. Muahet had a right to all ore within the boundary it defined. He also read defendant's award, which gave him the privilege of working the quarries for "stone," but not for ore, and the stone was to be worked in a proper manner. It also described the defendant's quarry as being 360 yards long. Mr. John Atkinson, deputy-gaveller of the Forest of Dean, stated that he was acquainted with Oak Wood and Bream Tuff Quarries; they had been worked properly; there was a vein in the middle which abounded in ironstone, and which it was evident had been extensively worked for ore, as large excavations had been made in it, clearly not for the purpose of obtaining stone. Other evidence was given, and the judge remarked, there were some features in the case which made it appear a trespass, and others a debt; the real question, however, was one of right, which he could not try. He reserved his judgment for another occasion.

PREVENTION OF THE SMOKE NUISANCE.—Some experiments have been conducted on the furnaces of the steam-engines of Mr. B. Molyneux, corn miller, Bootle-lane, Kirkdale, Liverpool, with Mr. Charles Wye Williams's plan of admitting air in finely divided streams for insuring perfect combustion, on the principle of the Argand burner, for the satisfaction of the Health Committee; who appointed Mr. Gowan, deputy town clerk; Mr. Moss, chairman of the Smoke Committee; Mr. Newlands, borough engineer; and Mr. McNaught, of the firm of McNaught and Wood, who manufactured the apparatus for Mr. Williams, to watch the experiment. The plan adopted by that gentleman, on this occasion, was a modification of his arrangement for admitting air at the bridge, and consisted of perforated boxes of iron attached to the furnace door, with suitable slides or valves for closing and opening the orifices, and regulating the supply. The trials were perfectly successful and satisfactory; coals were put on the fire and the door closed, when the smoke which escaped was thick and black, but in 30 seconds after opening the valves it entirely disappeared; the plates were again passed over the orifices, when instantly the smoke re-appeared, but on again allowing the full supply of air to enter, nothing could be observed from the chimney top. Coals were then fed to the fire, and the door shut with the valves open, and only a thin greyish vapour was seen for a few seconds, when all was clear. The plan has been in operation for years on the furnaces of the Liverpool and Dublin Steam-Packet Company, of which Mr. Charles Wye Williams is a director; and the plan is so simple, and so easily applied, that it ought to be properly appreciated by every proprietor of a furnace. The inhabitants of Liverpool have long complained of the nuisance occasioned by the smoke from the ferry-boats and factories; they have by laws sanctioned by legislative enactments for its suppression; and we presume no one who persists in thus polluting the atmosphere will be able to find a justifiable excuse after the satisfactory results of these experiments.

PORTABLE RAIL.—FOR RE-PLACING ON THE RAILS RAILWAY CARRIAGES AND VEHICLES WHEN THROWN OFF.—James Scott, carriage and wagon inspector of the Shrewsbury and Birmingham Railway Company, has just specified a patent for the invention of "an improved apparatus for shifting carriages, waggons, engines, and other vehicles on railways and tramways," which he thus describes:—This invention has reference to a portable apparatus, or rail, which may be carried with the engine, or guard's van, so that in the event of an engine or carriage being thrown off the line, it may be readily replaced by means of this apparatus in much less time than the same can be done by means of the appliances at present in use, such as screw-jacks, crowbars, planks, &c. The entire apparatus consists of two portable rails, which are kept in their proper position by two bars, made with a knee at one end, to take hold of the permanent rail, with holes in the other end, to allow the portable rail to extend to any distance that the wheels of the vehicle may have been projected from the permanent rail, when thrown off the same by accident. The end of the portable rail on which the carriage, or vehicle, is to commence its return to the permanent rail, is shown by the drawings attached to the specification, to be formed as a taper point, so as to enable the carriage, or vehicle, to rise to the height of the top of the rail; other suitable arrangements in regard to the invention are exemplified by the specification, but they require reference to the drawings in order to its proper explanation.

Papers from Adelaide, South Australia, to the 9th February have arrived, but they contain little general intelligence. The quotation of Barro Barro shares was 1600, net; money on freehold property ranged from 8 to 10 per cent., and on other securities from 10 to 20 per cent. The price of gold was 37. 10s. per oz. for Victoria, and 37. 14s. for Keweenaw.

MINING TRANSACTIONS—ALLEGED CONSPIRACY.

The proceedings recently instituted before Mr. Long, the sitting magistrate of the Marylebone Police Court, against Mr. Chas. Henry Edmunds, of 18, Cannon-street, City, and Oakley Lodge, Chelsea, solicitor; Mr. Robert Edmunds, of 23, Charlotte-street, Bedford-square, lodging-house keeper; and Mr. Alfred Elborough, of Lewisham, Kent, clerk in the office of the Committee of West India Merchants, 12, Old Jewry, by Mr. Haynes, who charged them with an attempt to defraud him of 3500l., have very naturally led to numerous enquiries, and excited considerable astonishment amongst those who have an interest in mining transactions. The parties alleged to be implicated in this serious charge are represented as holding a respectable position in society, and looking at the whole of the facts disclosed in evidence, we are disposed to think the public will be of opinion that there was really no intentional fraud on the part of the accused, but that they, like the unfortunate prosecutor, were probably too sanguine in the success of the undertaking. In expressing this opinion, however, we cannot but regret that parties should so blindly rush into wild speculations of this nature. A little forethought, and a little judicious enquiry—say, of some really respectable agent—would, in most instances, afford protection to the vendor, and would thus obviate the lamentable and irreparable difficulties into which too many, it is to be feared, are often overwhelmed. On a *prima facie* view of the case under consideration, it must be admitted that the defendants appear to have acted most incautiously; but it should be borne in mind that there is very little reliance to be placed on the unsupported, and, as it sometimes happens, *ad captandum* statements of counsel; and that where, as in this case, the evidence is of so conflicting and contradictory a character, it requires serious reflection before we come to a conclusion as to the real merits of the transaction, so as to pronounce, with anything like certainty, an opinion on which side the balance of truth prevails.

The circumstances as detailed by the counsel for the prosecutor were in substance as follows:—In 1851, Mr. Haynes was introduced to the defendant, Mr. Charles Henry Edmunds, a solicitor, who was represented to be connected with a valuable mining company, called the Wheal Trane, situated in Cornwall, which was described as being a first-rate concern. The prosecutor was introduced by Mr. C. H. Edmunds to Mr. R. Edmunds, the brother, and Mr. Alfred Elborough, who were represented as having an interest in the undertaking. The property, however, was stated to be in the possession of the Messrs. Bennett and Goldworthy; and it was proposed to Mr. Haynes that he should, with the defendants, take a sufficient number of shares in the concern to buy Messrs. Bennett and Goldworthy out; and ultimately it was agreed that Haynes should purchase 6520 shares held by those gentlemen for the sum of 3500l.—the prosecutor to pay 1000l. down, and accept bills for the remainder. When the negotiations were about to be completed, the real owner of the shares turned out to be a Mr. Mayhew, of Coggeshall, Essex, and who had never been known or mentioned in the transaction before. Upon the assurance, however, that there would be no risk, Haynes completed the purchase, and paid the 1000l., leaving 2500l. to be paid by his acceptance of bills, which were drawn at short dates. When the first bill became due, there were no funds to meet it, and Mr. Haynes was then told by the defendant that there were no shares sold, and no funds from them to meet any of those which would subsequently become due. The result was that Haynes was sued upon several of the bills. Judgment after judgment was obtained against him; and, under the advice of R. Edmunds, he was induced to go into retirement, where he was visited by Edmunds, by whom he was advised to keep himself quiet, and his lodgings secret. Haynes was eventually induced to transfer the whole of his shares to C. H. Edmunds as a trustee for him (H. Haynes), and to a Mr. Eason, as a trustee for Elborough.

The counsel further stated that he should be able to show that the shares were sold to a gentleman named James W. Smith, and that 2500l. was paid for them, but not one farthing of which had Haynes ever recovered. A deed was drawn up for the transfer of the shares from Elborough to Mr. Smith, on behalf of Haynes, which was prepared on the 13th of April, 1852, and on the 15th the defendant, R. Edmunds, waited upon Haynes, and wished him to sign an authority to Charles H. Edmunds and Eason, as trustees on behalf of himself and Elborough, to convey the shares to Mr. Smith, but this he did not do. The shares, however, were transferred, and the money paid, but Haynes never got one farthing for his shares, and was compelled to seek protection under the Insolvent Debtors' Act. The question was, whether the defendants could legally have made the transfer at the time they did. The learned counsel contended that the act had not been perfected by the prosecutor constituting these parties as trustees for the sale of these shares, and on that point rested the conspiracy and fraud. The magistrate, however, seemed to take a different view, and was of opinion that Haynes had consented to place the shares in the hands of Charles H. Edmunds and Eason, as trustees. The several learned counsel who appeared for the defendants offered to refer the matter to Mr. Haynes's family solicitor, observing that their clients would, after the whole of the facts had gone into, if there was one farthing proved to be due to Mr. Haynes pay it, or any amount that might be awarded. After some discussion the case was referred to Mr. Sergeant Wallinger for arbitration.

It will thus be seen, that so far as the statements have gone forth to the world, they are merely *ex parte*, and unsupported by evidence, and we quite concur with Mr. Duncan, the learned counsel for Mr. Robert Edmunds, and with the other legal gentlemen retained for the defence, that the direct contradiction of the defendants cannot be too widely diffused, and is entitled to charitable consideration. If they are men of unimpaired character, their position must have been a most painful one, but whatever may have been the unfavourable impression made by the learned counsel for the prosecutor, the fact of his having consented to arbitration will no doubt be considered strong presumptive evidence in favour of the accused. It is, we submit, a redeeming feature of considerable importance to the defendants; and, coupled with other circumstances—the shares, for instance, having been sold to Mr. Smith for the same amount which Mr. Haynes was to have paid—it would appear, if we have already intimated, that there was nothing of a criminal nature in the transaction, or that Mr. Haynes has been made the dupe of designing knaves. Mr. Haynes was clearly a willing party to many of the negotiations, and gave acceptances, which were afterwards dishonoured. That he is more an object of compassion than of censure, we sincerely believe; but the somewhat mysterious character in which he has recently appeared removes, in a great measure, the onus he has heaped upon those with whom he has been associated, and against whom he has instituted such a course of proceedings.

ADVANTAGES IN THE USE OF ANTHRACITE COAL FOR STEAM PURPOSES.—It is a remarkable fact, that the *Great Britain*, by adopting Anthracite coal, will, in the outward passage to Australia, save about 30 per cent. quantity consumed, weight for weight; also more than 250 tons in stowage; and she will require no detention for a renewed supply, which will be a further saving of at least five days in this one passage—equal to the entire saving of 1-12th in every respect.

THE SOLENT REVOLVING LIGHT.—The light which guides the packets through the Solent is a floating and revolving one, situated a short distance from Cowes. It revolves in order to distinguish it from the lights of the shipping in Cowes harbour. The propriety of its revolving has been questioned. When the light appears it appears as if you were close upon it, as it diminishes by revolving it appears a great distance off. This is deceiving. The light is a very brilliant one, and revolves by clockwork, once every two or three minutes. Several men attend the light vessel. They are on board for two months at a time, when they have a short leave for a month. No wives or children are allowed to live on board. The vessel goes along occasionally, to put on board provisions, and relieve the men. The latter, when on board, occupy themselves by day in making sails, and sometimes ships, in very foggy weather, or when severely manageable, have nearly in collision with the light-vessel. The people who live in those dreary districts, light-houses or light-ships, have each their peculiar dangers. A short time since a vessel could visit a light-house in the Channel for some considerable time on account of the weather, two men occupied the place, and one having died at the time, the other kept the decaying corpse, to show that there had been no foul play.

IRON BULLETS.—The Prussian engineering staff has been making experiments with a new projectile for muskets, the effects of which are described as satisfactory. Exact details have not been published, but enough has been ascertained to enable others to test the value of the invention. The experiments in question were conducted by Mr. C. Parnell, of Cross-street, Golden-square, writes:—"I find that the new bullet has the advantage of a new iron ball from Prussia—that they have increased the weight of the bullet, and are trying experiments upon it for military purposes, and I will add, that no doubt but it will be greatly extolled because it is not English. It is to be launched in the English character this morning after the time foregone. The new bullet is quite capable of doing the same thing for ourselves in pure English. For years I have been sending iron balls, and models of iron balls, to the Ordnance department for two-grooved rifles, and for the plain bored musket, but, unfortunately, have been English ones."

GALVANIC ELECTRICITY APPLIED TO MINING AND TELEGRAPHIC PURPOSES.

On Wednesday, Mr. H. M. Noad, Ph. D., delivered his second lecture at the United Service Institution, Whitehall-yard, "On Galvanic Electricity as applied to Blasting Rocks in Mines, Quarries, &c., and for the purposes of the Electric Telegraph." The lecturer commenced by taking a brief review of the previous lecture—a summary of which appeared in our last Journal; and observed that, whatever difference of opinion might exist among philosophers as to the cause of the evolution of a current of galvanic electricity, whether supporting the theory of contact or chemical action, there could be none as to the fact that its continuation was owing to the latter principle. Attention was then drawn to a Grove battery, in which nitric acid was the exciting fluid—the lecturer stating that whether he employed one or ten cells, the quantity of electricity was the same; but every additional cell greatly increased the intensity or capability to overcome resistance. A piece of copper had been left since the previous lecture in a glass vessel, containing a solution of chloride of sodium; and in another vessel also a piece of copper, having a small piece of zinc soldered to it. In the former the solution had obtained a green tint, showing the presence of a solution of the copper, forming an oxychloride; but in the latter the copper had been protected at the expense of the zinc—a white oxide of which appeared in powder at the bottom of the vessel. Sir Humphry Davy had suggested this arrangement for the preservation of ship's copper sheathing, which it perfectly effected; but kept the bottom so clean, that it became covered with barnacles, and other mollusca, to such an extent as greatly to impede the sailing. The decomposition of water by the battery was then shown in the usual manner, with two tubes, each connected with a pole of the battery—hydrogen being evolved in one, and oxygen in the other; and the lecturer said the peculiar phosphoric smell which always accompanied this experiment was due to the presence of "ozone"—an element always present in the atmosphere, and, although in small proportion, produced powerful chemical effects. It might always be detected during thunder-storms, and was considered to be a peroxide of hydrogen. It had a greater affinity for iodine, which was shown by wetting a piece of paper in a solution of iodine and starch, which, when placed in the vessel containing the gases from the decomposed water, was instantly turned into a deep blue, although not more than, perhaps, a 1,000,000th part of a grain of ozone was present. Dr. Faraday had constructed an instrument, for measuring the quantity of electricity given off by the decomposition of water in one vessel, which was shown in action, and the combined gases were exploded. Mr. Noad then exhibited a model of the first arrangement for an electric telegraph. It was the production of Sommering, and consisted of a glass trough, mounted on a mahogany slab, in which were a series of metallic discs on each side, connected inside the trough containing the liquid. On applying the poles of the battery to any two of the series, a stream of gas would rise in that part of the trough opposite; and, by arranging each disc to represent a letter, a complete telegraph was made. It had, however, been quite superseded by the needles. Several beautiful experiments were then exhibited to show the power of the battery in decomposing binary compounds—iodide of potassium, nitrate of soda, &c. It was observed, that the ingenuity and perseverance in philosophical research possessed by the English was remarkable; no sooner was a new principle discovered, than it was applied to commercial uses. The power of the galvanic battery to decompose coloured solutions had been beautifully turned to account by Mr. Bakewell, in the construction of his printing telegraph, and also for printing calico or linen. A piece of linen was moistened by dilute nitric acid, and an ornamental iron die being placed on it, and connected with the battery, a jet black impression was obtained; a copper die gave a bright brown; and thus by employing different metals, various colours can be produced. In the telegraph, a piece of tin foil is covered with a thin coat of varnish; a pen is then dipped in caustic soda, and the message written on it, which decomposes the varnish; it is then placed round a cylinder attached to the telegraph instrument, and a pointer, in connection with the battery, drops on it. As the cylinder revolves, the connection is broken and restored, as the pointer passes over the varnish, or the bare metal of the writing, and a *fac simile* of the message is produced on a slip of paper saturated with ferro-cyanide of potassium and muriatic acid, placed round a similar cylinder at a distant station, in blue writing on a white ground; white on a blue ground may be obtained by writing on the tin foil with varnish. A secret telegraph was also described. If a paper is moistened with hydro-chloric acid, and written on by a steel pen with chloride of iron, on passing the current the writing will be impressed, but invisible until passed through a solution of ferro-cyanide of potassium. The third lecture, which concludes the series, will be delivered on Wednesday next.

ON SILICA, AND SOME OF ITS APPLICATIONS TO THE ARTS.

The Rev. J. Barlow read a paper on this subject at the Royal Institution.—Under all forms silica is capable of combining with bases as an acid. Heat is, however, necessary to effect this combination,—a combination of which all the well-known silicates, whether natural, as felspar, mica, clay, &c., or artificial, as glass, alaba, &c., are the results. The common forms of insoluble glass are produced by the union of silica with more than one base. But, when combined with an alkaline base only, silica forms a soluble glass, the degree of solubility of which depends on the proportion of the silicic acid to the alkaline base. This soluble silicic acid (or water-glass) may be prepared by various processes. Messrs. Ransomes obtain it by dissolving broken flints in a solution of caustic alkali at a temperature of 300° Fah.—[Communication made to the Royal Institution by Prof. Faraday, *Mining Journal*, June 24, 1848.]—This water-glass has been applied to several purposes, three of which were noticed:—1. To protect building-stones from decay. Stone surfaces, by being exposed to the atmosphere, become liable to disintegration. Moisture is absorbed into their pores. The tendency of their particles to separate, in consequence of expansion and contraction, produced by alternation of temperature, is thus increased. Sulphurous acid is always present in the atmosphere of coal-burning cities, and corrodes the calcareous and magnesian ingredients of stones and dolomites. As a preventive of destruction, whether arising from physical or chemical causes, it has been proposed to saturate the surface of the stone with a solution of the water-glass. It is known that the affinity of silica for alkali is so feeble that it may be separated from this base by the weakest acids. According to the expectation of those who recommend the application of stone, the carbonic acid of the atmosphere will set the silica free from the water-glass, and the silica, thus separated, will be deposited within the pores and around the particles of the stone. The points of contact of these particles will thus be enlarged, and a sort of glazing, or insoluble silica will be formed, sufficient to protect the stone against moisture, &c. Two portions of Caen stone were exhibited, one of which had been soaked in a solution of water-glass two months before. The surface of the soaked specimen was soft, readily abraded when brushed with water, and its calcareous ingredients dissolved in a weak solution of sulphurous acid. The silicified surface resisted the action of water and of dilute acid. 2. Another proposed use of the water-glass is that of *hardening cements*, &c., so as to render them impermeable by water. Fourteen years ago, Mr. Anthony proposed several applications of the water-glass: amongst others, the rendering mortars water-proof. He also suggested that this substance might be employed as a substitute for size in white-washing. It was demonstrated by experiments that carbonate of lime, mixed up with a weak solution of water-glass, and applied as a whitewash to surfaces, was not washed off by sponging with water, and that common whitewash, mixed in the usual manner with size, was rendered adhesive when washed with water-glass. 3. The *Stereochromy of Fuchs*. The formation of an insoluble cement by means of water-glass, whenever the carbonic acid of the atmosphere acts on this substance, or whenever it is brought in contact with a lime-salt, has been applied by Fuchs to the process of *freezing*, which thus becomes invested with the capability of receiving and perpetuating works of the highest artistic character, and which may be executed on a vast scale. The stereochromy has been adopted by Kaibach in decorating the interior of one of the national edifices at Berlin. These decorations consist of historical pictures, 21 ft. in height and 24½ in width, of the three finished, which has been remarked that they have all the brilliancy and vigour of oil paintings, while there is the absence of that dazzling glare which now oil paintings are apt to present, unless they are viewed in one direction, which the spectator has to seek for. Mr. A. Church has suggested that if the surface of oolitic stones (such as Caen stone) is exposed to be protected by the process, it might be used, as a natural intention, to receive coloured designs, &c., for exterior decorations; the painting would then be cemented to the stone by the action of the water-glass. Mr. Church has also executed designs of leaves on a sort of terra-cotta,

prepared from a variety of Way's silica rock, consisting of 75 parts clay and 25 of soluble silica. This surface, after being hardened by heat, is adapted for receiving colours, and for retaining them after silicification.

MR. CARDWELL'S "NEW" RAILWAY AND CANAL TRAFFIC REGULATION BILL.

Mr. Cardwell has been, as we predicted he would be, signally and thoroughly beaten in his attempt to hand over to the Board of Trade the management of our railways, and establish under that tribunal a bureaucracy which would have been as injurious to the interests of the shareholders, as we verily believe it would, through the political patronage thereby conferred upon a governmental department, have been dangerous to the constitutional liberty of the people; while at the same time the proposed interference would have so complicated the working arrangements upon all through lines, that what professed to be a boon would have proved a very curse to the passenger and goods traffic of the country. The energy and determination of the railway representatives convinced the President of the Board of Trade, and his colleagues, that there was not a chance of carrying through the House of Commons the monstrous clauses of what we may now term the "old" confiscating bill, for "a better provision for regulating the traffic on railways and canals." Mr. Cardwell has been obliged to compromise the matter in Committee, and on Thursday night the bill, "as amended," was presented to the House of Commons in such a shape, that even its creators must have been puzzled to recognise their own bantling. After "roaring like any lion," their "voice" has become as "gentle" as that of a "sucking dove."

Mr. Cardwell and his supporters opened their campaign against the railway companies by charging them with a systematic hostility against the interests of the public; and they called aloud for the strong hand of the law to take hold of them by the necks; and, in the language of the citizens of the Celestial Empire, "Squeeze them to death." Railway companies, it was asserted, never had done, and never would do any thing to develop the traffic resources of the country except upon compulsion, although, by the way, it is their direct interest so to do; and, therefore, it was necessary that Government should step in, and, through the Board of Trade, decide what working agreements between railway companies should, or should not, be sanctioned; what facilities for through transit should or should not be granted by one railway to another; what tolls, rates, and charges, should or should not be levied over such through lines of railways; and when railway trains should be dispatched from, and when they should stop at intermediate, and when arrive at terminal stations.

Questions involving the gain or loss of tens of thousands of pounds sterling per annum to rival companies, were to be decided by men who might know little of, and care less for, the complicated difficulties out of which the differences to be adjusted arose; minute details of so difficult a nature as to be almost incomprehensible to any but the most experienced of railway officials, were to be settled upon the dictum of some youthful civil engineer; and this wholesale, and hitherto unheard of interference with private property was to be perpetuated, because the existence of certain incoherent clauses, flowing from the incongruous acts of the Legislature, had been proved before a committee of the House of Commons, and also because Ministers desired to obtain such a control over the destinies of 300,000,000 of railway capital as should virtually destroy or neutralise the independence of a large number of the members of the lower House, and make the Government of the day so strong, through the influence it might exercise by the enormous patronage it could bestow, as to beat down anything like an independent expression of opinion by that branch of the State.

Such was the attack upon railway property, and such, no doubt, the end sought to be attained. What is the result of this scandalous endeavour to grasp the control of the railways and canals of the kingdom, and the no less scandalous attempt to inflict a deadly blow upon the independence of the representatives of the people? It is the proposed enactment of a comparatively milk-and-water clause for "What? For 'affording all reasonable facilities for the receiving, and forwarding, and delivering of traffic, &c.'; for, with the exception of the preamble, and the explanatory paragraphs, the 'new' bill has not a single sentence of the 'old' bill. This clause is as follows:—

"Every railway company and canal company and railway and canal company shall afford all reasonable facilities for the receiving and forwarding and delivering of the traffic upon and from the railways and canals belonging to or worked by such companies, and for return of carriages, trucks, boats, and other vehicles, and shall not make or give any undue or unreasonable preference or advantage to or in favour of any particular person or company, or any particular description of traffic; and every such railway company and canal company and railway and canal company having or working railways or canals which form part of a continuous line of railway or canal or railway and canal communication, or which have the terminus, station, or wharf of the one near the terminus, station, or wharf of the other, shall, so far as reasonably and conveniently may be, afford all due and reasonable facilities for receiving and forwarding all the traffic arriving by one of such railways or canals by the other, without any unreasonable delay, and without any undue or unreasonable preference or partiality, and so that no obstruction may be offered to the public desirous of using such railways or canals or railway or canal as a continuous line of communication; and so that all reasonable accommodation may be means of the railways and canals of the several companies, be at all times afforded to the public in that behalf."

To give effect to this enactment, persons complaining of any omission made in violation or contravention of it, can, upon the certificate to her Majesty's Attorney-general in England or Ireland, or her Majesty's Lord-advocate for Scotland, of the Board of Trade, alleging any such violation or contravention, apply through one of such officers, to her Majesty's Superior Courts at Westminster or Dublin, or to the Court of Session in Scotland, and it will be lawful for such court or judge to hear and determine the matter of such complaint; and they may, if they think fit, direct and prosecute in such mode and by such engineers or other persons as they shall think proper, all such enquiries as may be deemed necessary to enable such court or judge to form a just judgment of the matter of such complaint. Upon proof of any violation or contravention of the Act, the court or judge can issue a writ of injunction or interdict, restraining the parties complained of from further continuing such violation or contravention, and the court or judge may make an order directing the payment by the parties of a sum of money, determined upon by the judge or court, not exceeding a certain amount per day (the sum is not stated in the bill, but will be decided in committee), after a day to be named in the order, that the parties shall fail to obey the injunction or interdict, to the satisfaction of the Board of Trade, or of some barrister or other competent person to be named by the court or judge in such order.

Looking at the treatment which the railway interest has received at the hands of the Legislature, the consent of the companies to this degree of interference may be fairly treated as a concession for the sake of public convenience and accommodation; and indeed, Mr. Cardwell himself, in the course of his address in the Commons, on Thursday night, admitted that the representatives of the railway body had, in a spirit of frankness and sincerity, manifested an earnest desire to facilitate, as far as practicable, the conveyance of passengers and goods over through lines of communication. What a satire this admission, upon the conduct of the Government itself, as evidenced in their defeated attempt to clutch at the control of three hundred millions of railway property.

We heartily rejoice at the success of the opposition to the "old" confiscating bill, and we are no less gratified at the liberality with which the railway companies have, in their consent to the enactment of the facilitating clause quoted above, met the requirements of the community. They have defeated a measure that would ultimately have proved destructive of their interests, and they have shown that, while they know how to protect their own, they are at the same time anxious to exercise, for the public weal, the great parliamentary powers conferred upon them in return for the expenditure of their enormous capital.

Transactions on the Stock Exchange.

Shares.	Paid.	Last Prices.	Business Done.
100000 Agua Fria	1	1 1/2	1 1/2
30000 Anglo-Australian Gold	1	1 1/2	1 1/2
100000 Anglo-Californian	1	1 1/2	1 1/2
100000 Australian	1	1 1/2	1 1/2
20000 Australian	1	1 1/2	1 1/2
60000 Australian	1	1 1/2	1 1/2
100000 Australian Freehold	1	1 1/2	1 1/2
50000 Ave Maria	1	1 1/2	1 1/2
200000 British Australian Gold	1	1 1/2	1 1/2
210000 Carsons Creek	1	1 1/2	1 1/2
80000 Clarendon Company, Jamaica	1	1 1/2	1 1/2
100000 Colonial Gold	1	1 1/2	1 1/2
100000 English and Australian Copper	1	1 1/2	1 1/2
25000 Fortuna	1	1 1/2	1 1/2
72000 Grand Duchy of Baden	1	1 1/2	1 1/2
100000 Great Nugget Vein	1	1 1/2	1 1/2
60000 Liberty	1	1 1/2	1 1/2
2000 Mexican and South American	1	1 1/2	1 1/2
80000 New Granada	1	1 1/2	1 1/2
200000 Nouveau Monde	1	1 1/2	1 1/2
100000 Port Phillip	1	1 1/2	1 1/2
100000 Pontbault Silver-lead	20	15	1 1/2
60000 Quana Rock	1	1 1/2	1 1/2
30000 South Australia	1	1 1/2	1 1/2
70000 Waller	1	1 1/2	1 1/2
100000 West Mariposa	1	1 1/2	1 1/2
100000 Yuba	1	1 1/2	1 1/2

HULL, MAY 4.—Our correspondents (Messrs. T. W. Flint and Co.) state that there is no feature to notice in mining shares this week. There is more inclination to sell than to buy; but the miserable prices now ruling make sellers very indifferent. Wellingtons are offered at a trifle above 2½ per share.

PERRAN UNITED.—REPORT.—"Capt. Polglaze and myself went all through Perran United yesterday, and both of us are of the same opinion; in fact, no two opinions could be given of her. She is really a most magnificent mine; and had I money I would lay out every farthing in buying up the shares, for I am positive they must go up to double or treble their present price. She is cheap at £30,000 (50s. per share), as she will pay dividends in August or September next; and will continue raising 200 tons of copper per month."

Capt. JAMES will SELL in whole, or in part:—
 20 Arundell, 37s. 6d. 75 Great Bryn, 3s. 6d.
 20 Augustus, 3s. 6d. 20 Lamerton, 3s. 6d.
 40 Brindley, 6s. 10 Las Infantas, 2s. 6d.
 100 Bodmin United, 2s. 6d. 20 Melbourne Gold, 1s. 6d.
 100 Cubert, 2s. 6d. 20 Mollard, 6s. 6d.
 200 Cwmbeisland (recom- 100 North Tazear, 1s.
 mended), 7s. 6d. 300 North Hingston, 4s. 6d.
 40 Cwm Darren, 10s. 20 North Levant.
 100 Combarston, 3s. 6d. 30 N. B. Burra Burra, 3s. 6d.
 30 Great Cambrian, 37s. 6d. 100 Perr. United, now Perr.
 30 Great Crinoid, 20s. 6d. 30 W. L. Leisner, 2s. 6d.
 30 W. Catharine, 17s. 6d.

See report (private and confidential) of this magnificent mine.
 Capt. James recommends holders of shares wishing to sell to favour him with their instructions, because, from the numerous applications he is receiving every post and his large connection, he has immense facilities for a quick disposal.
 Office of Mines, 63, Gracechurch-street.

MINING AND GOLD DIGGINGS, SPECULATIONS.—Mr. HOPKINS has RESUMED his PROFESSIONAL DUTIES IN LONDON, as CONSULTING ENGINEER ON MINERAL PROPERTIES, &c. All letters on business to be addressed as under for the present.
 His clients will receive in a few days every information relative to the Gold Regions of Australia, and what is required to ensure success, to public companies in that part of the world.—38, Thurlow-square, Brompton, 2d May, 1854.

GOLD MINES, AND OTHER MINING SPECULATIONS, HOME AND FOREIGN; their EXPLORATIONS and SYSTEM OF REDUCTION, &c.—Capitalists and others requiring INFORMATION, or PERIODICAL ADVICE on the above, for their government, may obtain it on application to Mr. EVAN HOPKINS, C.E., 38, Thurlow-square, Brompton.

TRETOIL.—CAUTION.—To the ADVENTURERS in BODMIN UNITED MINES, and WHEAL MESSER, in the parish of Lanivet, their agents, servants, workmen, and whom else it may concern.
 I, the Undersigned, SUSAN HENWOOD, do hereby give PUBLIC NOTICE, that I have NOT GRANTED any LIBERTY, LICENSE, or AUTHORITY, to the ADVENTURERS in BODMIN UNITED MINES, or WHEAL MESSER, or to any other person or persons whatsoever, to enter upon, dig or work, or search for minerals or metals, or for any other purpose whatsoever, upon, or under my freehold estate or lands of TRETOIL, in the said parish of Lanivet, in the occupation of Mr. Thomas Prophet, my tenant, or over, upon, or under the adjoining farm of Tretoil, occupied by Mr. Edward Johns, or over, upon, or under the common moors, appertaining to and adjoining the said lands, throughout all of which premises and properties I have a right and interest in the minerals and metals therein. And I hereby FORBID the said ADVENTURERS and all other persons, on pain of prosecution, from entering upon any part of the said premises, for mining or for any other purpose, without first making application to me, and obtaining my authority in writing for that purpose.
 Dated 12th day of April, 1854. SUSAN HENWOOD, Rosewin, Truro.

TO MANAGERS OF IRON FOUNDRIES.—WANTED, as MANAGER for a large and well-established IRON FOUNDRY and ENGINEERING WORKS in North Lancashire, an ABLE and EXPERIENCED PERSON. He must be well acquainted with, and able to make, working drawings, and competent to direct a large body of workmen. As the entire management of the works will be entrusted to him, he will receive, in addition to a liberal salary, a prospective interest in the success of the concern. None need apply but those who are thoroughly competent to undertake the office, and whose testimonials are unexceptionable.—Application to be made to Mr. THOMAS STOKES, Lancaster.

TO IRONMASTERS AND OTHERS.—WANTED, a SITUATION as FORGE and MILL MANAGER by a person upwards of 50 years of age, who has had 30 years' experience, and understands the puddling process for tin bars, rails, and merchant bar-iron, in all their various forms and sizes; and is acquainted with the erection of puddling and mill furnaces. Reference as to ability and character can be given.—Address, "L. P.," *Mining Journal* office, 26, Fleet-street, London.

TO MINE AGENTS, PROPRIETORS OF SLATE QUARRIES, AND OTHERS.—TO BE SOLD, 30 LNS OF BRIDGE RAILWAY IRON, at 59 per ton. It is punched and ready for use, weighing 17 lbs. to the yard, and is now lying at the Newton Station of the South Devon Railway.—Further information may be obtained on application to Capt. GEO. BARNETT, of Basington, near Newton, Devon; or of Mr. CHARLES 2d, Antinfraria, London.—London, May 3, 1854.

TO RAILWAY COMPANIES, IRONMASTERS, AND FOUNDRERS, desirous of entering into CONTRACTS for a limited supply of COKE or COOKING COAL of standard quality, delivered on the South Wales Railway, near Bridgend, will be treated with upon application to "A. B.," Letter-box No. 10, Bridgend, stating quantity of either per week.—Bridgend, May 2, 1854.

THE BANDON BARYTES AND COPPER MINING COMPANY, COUNTY OF CORK, IRELAND.—WANTED A PERSON PRACTICALLY CONVERSANT with the MANUFACTURE OF SULPHATE OF BARYTES.—Applications (accompanied by testimonials) to be made to William Goodchap, Esq., Bandon Barytes and Copper Mining Company, Walbrook House, Walbrook, London.

THE BANDON BARYTES AND COPPER MINING COMPANY, COUNTY OF CORK, IRELAND.—The committee of management have just RECEIVED A PARCEL OF SAMPLES OF PURE SULPHATE OF BARYTES from their mines, which may be SEEN on application to Mr. J. Tyler, the secretary, at the offices of the company, Walbrook House, Walbrook, between the hours of Ten and Two.

COAL PROPERTY.—TO BE SOLD, ON MODERATE TERMS, a LARGE COAL-FIELD in DEAN FOREST, Gloucestershire, containing FOUR SEAMs OF COAL, averaging together about 14 ft. in thickness. The property is well situated for working, and for transit of the coals; or arrangements may be made with the proprietor for his joint co-operation.—Further particulars may be had by applying to Mr. PEACOCK, Ruadon, Gloucestershire.

TO MINING ADVENTURERS, CAPITALISTS, AND OTHERS.—TO BE DISPOSED OF, A LEAD MINING SETT IN FLINTSHIRE, together with a 70-horse CONDENSING ENGINE, of modern construction, with new boiler, pumps, T-bob, &c., in complete order, and now at work.—For further particulars, apply to Messrs. EDGEMORTH and FROX, solicitors, Wrexham.

STEAM-ENGINES.—FOR SALE, A PAIR OF 75-horse CONDENSING MARINE BEAM ENGINES, nearly new, made by one of the first makers. These engines are well adapted for screw steamers, or for factories, mills, &c.—For particulars, apply to Messrs. SWAYNE and BOVILL, engineers, No. 19, Abchurch-lane, City. The engines can be seen at their factory, Mill Wall, Poplar.

WESTMINSTER IMPROVEMENT BOND OF £500 TO BE SOLD FOR £390; incorporated by Act of Parliament, and payable in 1857, bearing interest at 5 per cent., payable half-yearly, the next payment 10th of July.—Apply to Mr. BROWN, 2, Adam's-court, Old Broad-street.

SLATE QUARRIES, CORNWALL.—An ADVANTAGEOUS OPPORTUNITY now offers for WORKING within certain lands in the DISTRICT OF THE DELABOLE QUARRIES.—For terms, apply to Mr. W. D. KING, solicitor, Camelford, Cornwall.—Dated April, 1854.

CAIME MINE, COUNTY WEXFORD.—The INTEREST in the LEASE TO BE SOLD.—Apply to the Mining Company of Ireland, Dublin.

WHEAL RICARDO.—A HIGHLY VALUABLE PROPERTY, TO BE DISPOSED OF, situate in the parish of St. Minver, adjoining the east of the well-known rich Pentire Glass sett.—Apply to "R. V.," *Mining Journal* office, 26, Fleet-street, London.

CARADON WOOD MINE.—A FEW HUNDRED SHARES FOR SALE; all calls (about 26s.) paid.—Offers to be addressed to "W. X.," *Mining Journal* office, 26, Fleet-street, London. Several trials of the gossan have yielded at the rate of about 1 oz. of gold per ton; the lode is very large, water power abundant, and a good water-wheel erected. It is intended to work for gold as soon as an efficient machine can be procured; and, in the meantime, a trial on a large scale is expected to be made.

TEHIDY MINE.—ONE HUNDRED SHARES in this important COPPER MINE TO BE SOLD, at £2 per share (all calls paid).—Apply, by letter, to Mr. ALFRED WALTER, 2, Weiman-row, Birmingham.

FOR SALE.—200 shares in Cwmbeisland (gold), at 5s. per share; 50 Crebors, at 22s. per share; 50 South Crenvers, at 22s. per share; and 15 Henlocks, at 42s. per share.—"Z. E. D.," *Mining Journal* office, Fleet-street, London.

WANTED.—200 Wheal James, at 5s. per share; 5 or 10 in West Phoenix, at £5 per share; on applying to "A. B. C.," *Mining Journal* Office, 26, Fleet-street, London.

ELECTRIC COLOURS.—THE ELECTRIC POWER, LIGHT, and COLOUR COMPANY is prepared to SUPPLY the TRADE generally with their COLOURS, which for quality and lowness of price are unequalled.—Address, W. PROSSER, Esq., commercial manager, Frogmore-lane, Wandsworth, Surrey.

FOR SALE, FOR CASH, THE WHOLE OR PART, of the following SHARES, free of calls to this day; in one lot preferred:—
 25 Cwm Darren, 12s. 100 West Sortridge, 2s. 50 Tassan Lead, 5s.
 125 Cwmbeisland, 5s. 9d. 30 Tamar Maria, 7s. 6d. 20 Tremollet, 3s.
 35 Mollard, 2s. 8d. 5 Arundell, 2s. 20 Monarch Gold, 1s. 3d.
 Apply to Mr. GEORGE HUTCHINSON, 93, Albany-road, Old Kent-road.

SHARES WANTED.—MR. RICHARD TREDDINICK, No. 42, Lombard Street, LONDON, DEALS in every description of MINING, RAILWAY, BANK, INSURANCE, and other SHARES, GOVERNMENT FUNDS, and PUBLIC SECURITIES GENERALLY.

Mr. TREDDINICK is constantly in the markets, and possesses unusually great facilities for the purchase and disposal of mining and other negotiable securities; and as he is ostensibly a DEALER in SHARES, he respectfully offers his services to the public both as buyer and seller, through which the usual commission paid to a broker can be saved. Mr. TREDDINICK charging only the market price of the day, being assisted with the difference between the buying and selling price at the time the order is executed. Current lists of prices, and statistical information, acquired over 15 years' residence in Cornwall, and 10 years' experience in the London Share Markets, furnished gratuitously upon personal application by residents in the metropolis, or written communications from the provinces.

Mr. TREDDINICK can confidently recommend the following mines for investment; most of them pay dividends 16-monthly or quarterly, whilst the residue are situate in good localities, having analogy in their favour, and from the work done and money expended under practical management, are fast approaching profitable positions:—
 West Caradon West Caradon West Caradon
 Bontalack North Pole Wheal Seton
 Bryntal North Caradon Leeds Town Consols Mill Pool
 Condurow South Frances North Cornwall Wheal Harriett
 Devon Great Consols Spearne Consols South Ding Dong North Buller
 Dolcoath Trumpet Consols Balmoon Consols Wheal Basset
 East Margaret Exmouth and Adams Roseman Wheal Auster

Mr. TREDDINICK is also generally in a position to BUY or SELL in the following mines, although he does not recommend them for investment:—
 Alfred Consols Trevelyan Wheal Golden
 West Alfred Consols Herodfoot Trevelyan Wheal Ding Dong
 Great Alfred Consols West Bassett Trevelyan Consols Kilbricken
 Carn Erea East Caradon West Seton Trannack Consols
 East Pool Clive West Frances Cefn Brynno
 Comfort Clive United Bell and Lanarth Kemegey
 South Tamar Crow Hill Poltimore Trefusis
 Wheal Messer Great Badden Tincroft Paul's Downs
 East Tamar West Providence Trebase
 An INTEREST can be secured by two or three gentlemen of first respectability in a TWMINE, possessing considerable merit, upon most advantageous terms, the leases of which have only recently been secured.

MR. MARSH WILL SELL, BY PUBLIC AUCTION, at the
Auction Mart, opposite the Bank of England, on Thursday, 18th May, 1861.

MR. MARSH WILL SELL, BY PUBLIC AUCTION, at the
Auction Mart, opposite the Bank of England, on Thursday, 18th May, 1880, at
One for Two o'clock precisely, **SEVERAL LOTS of SHARES** in the following well-known
valuable MINES:—viz., North Gyle of Towy, Kilbuckton Cathedral, Wharfedale
St. Anby and Grylla, Pen-y-Gallt, Wheal Norris, Yalding Towy, Calverdale, &c. &c.
Particulars may be had at the Auction Mart, opposite the Bank of England; and at the
offices of Mr. Marsh, auctioneer and estate agent, 2, Charlotte-row, Mansion House.

MERIONETHSHIRE, NORTH WALES.

CLANYMOWDDACH GOLD AND COPPER MINE TO BE DISPOSED OF BY PRIVATE CONTRACT.—This mine is situated within a mile and a half of the sea-port of Barmouth, adjoins the turnpike-road to Dolgellau, and is situated on the right bank of the Mowddach navigable river, on the banks of which wharves may be conveniently erected for the shipment of ore. The ground is intersected with veins of quartz in sight on the surface along the whole length of the lake, which comprises nearly 100 acres, and they are supposed to be identical with the celebrated Clogau, Cae-gwyn, and Prince of Wales gold veins.—For further information and to treat apply to Mr. JOHN JONES, solicitor, Dolgellau, at whose office a map of the premises may also be obtained.

TWO TIN SMELTERS, GOLD REDUCERS, ENGINEERS
BREWERS, &c.—TO BE LET, for a term of seven, fourteen, or twenty years, with immediate possession, a substantially-built and extensive works, situated in the well-known street, in the borough of Truro, and known as the "TIN SMELTING WORKS," lately in the occupation of the Governor and Company of Copper Miners of England, comprising the necessary BUILDINGS, OFFICES and FURNACES necessary for carrying on an extensive tin smelting business, together also with a commodious YARD and QUAY, immediately abutting on the Truro tidal river. These works have been recently constructed at great expense on a superior plan, are within easy distance of productive tin mines, and afford unusual facilities for obtaining coals and shipping off block tin and other merchandise. There are also in the immediate locality of extensive commercial wharves, where supplies of all kinds are kept, and from which bulk cargoes may be had, greatly increasing the facilities for conveying tin ores to the works. These works are at present extensively adapted for the reduction of ores containing gold, lately ascertained to abound in Cornwall, or they may, at a trifling expense, be converted into an iron foundry and engine manufactory, or into a complete brewery.—Application (on principle only) to be made to Mr. SAMUEL MOYLE, Dosvigo House, or to Messrs HOBBS and HOCKLEY, solicitors, TRURO.

TO BE SOLD, OR LET, all those MINES, or SEAMS OF COAL under the **BOOTH HALL ESTATE**, near Cheshire, **STAFFORDSHIRE**. The estate is surrounded with good roads, and upwards of 50 acres of the mines of which are of the best quality, and average 3 ft., 3 ft., and 4 ft., respectively. The quality is of the most excellent quality, the demand almost unlimited, and the price in the immediate neighbourhood are highly remunerative. Parties desirous of embarking in the coal trade will find this a most eligible opportunity, rarely to be met with. A map of the estate may be seen, and particulars had, on application to Mr. WATSON at Mr. Joseph Bennett's, calico printer, 7, Charlotte-street, Manchester; or to Mr. HENRY ADKIN, on the estate; or at Birch Vale Print Works, near Hayfield, Derbyshire.—N.B. The Booth Hall Estate is situated about 1½ mile from Frog Hall Station on the North Staffordshire Railway, and at the same distance from Crewe, and equal distances from Stoke Newington and Stafford.

TO BE LET.—THE GLENGOLA LEAD MINE, near Oughterard in the county of Galway. There is an overshot water-wheel, 18½ ft. in diameter, which works the pump. There is also a horse-wheel, cottage for a capable and steady man, a kitchen, a stable, office, magazine, smithy, carpenters' workshop, store, and two dressing-rooms. Specimens of ore, &c., can be seen at the Geological Museum, London, and at the Museum of Irish Industry, Dublin.—For terms, &c., apply to G. F. O'FLAHERTY, Esq., Lemonfield, Oughterard, Ireland.

TO BE LET, ON ROYALTY, at Kimberley, in the parish of Greasley, within five miles of Nottingham, with easy access to the Nottingham Canal, about 500 acres of MINERAL PROPERTY, containing the COAL, FIRE-CLAY, SILLS, WATERLOO, and LOWER HARD and SOFT COALS.—For particulars apply to Mr. R. G. COKE, Ankerbrook, near Chesterfield; or Mr. G. H. BOSS, The House, near Dudley.

TO CAPITALISTS, AND OTHERS.—To BE LET, with immediate possession, the MULGRAVE ALUM WORKS, with THE STRAM-ENGINE MACHINERY, and other WORKING STOCK and PLANT, as the same have lately been occupied and used by the late tenant.—There is a sufficient stock of burnt lime, and of liquors in process of manufacture. The manufacture of alum has been proceeded with by the owner to prevent the necessity of any assistance being required from the incoming tenant, who can continue his business carrying on the works by an in-coming tenant, without any considerable outlay or expense, and will be able to get up again immediately after the expiration of the term.

and they will be ready to make a start at once, producing immediate profit to a tenant. The works are situated at Sandgate, Kentlesne, near Whitby, in the county of York. The alum rocks are inexhaustible, and the water is of the best quality.—For particulars, apply to Messrs. VERNON & CO., Solicitors, 51, Lincoln's Inn-Fields, London; JOHN BECHAMM, Esq., Engineer, Whitby; and of Mr. KERR, of Lyeth Hall, Whitby, who will show the works.

BALTIMORE COPPER AND GOLD MINING COMPANY.

THE TRIAL ANNOUNCED TO TAKE place at the mine on the 10th and 11th inst. BERDAN'S MACHINES, IS POSTPONED, in consequence of the illness of the management having received the following letter from Mr. Berdan's agent, ADOLPHUS GRAY, Esq., Fall-mill, May 1.

South Molton, May 1, 1854.—GENTLEMEN: I have just returned from inspecting the machinery on the course of completion, at the Pottimore Mine, and after a careful examination, I fear the four basins may not be ready for a public trial on Tuesday next. I suggest that you should not give notice of a public trial until some little time should elapse, in order to see that all parts of the machinery work satisfactorily.

CROW HILL MINE (ST. STEPHEN'S).—In pursuance of resolutions passed at a General Meeting of the Adventurers in this Mine, held at the mine on the 14th of March last, the seripholders are now required to REGISTER their NAMES IN THE COST-BOOK OF THE MINE; those adventurers who are unable to attend in person to inscribe their names may obtain blank forms for that purpose by application to the secretary.

THE CALL of TWO SHILLINGS AND SIXPENCE per share made by a resolution of the said General Meeting of adventurers is PAYABLE on the 1st of May next, at the company's offices.

W. C. POLLOCK.

Dated, 55, Old Broad-street, April 27, 1854.

GREAT POLGOOTH MINE.—NOTICE.—At a GENERAL MEETING of the adventurers in this mine, held at the London Tavern, Bishopsgate-street, on Monday, the 24th of April, 1854,

The following resolutions were passed :-

1. That the report of the committee and the accounts to the end of February be received and printed for the use of the adventurers.
2. That the rules and regulations now read, for the future guidance of the company be adopted.
3. That the holders of scrip certificates of shares who shall fail to bring in the same for registration and exchange for shareholders' certificates within one calendar month from the date of the meeting, shall be deemed to have relinquished all claims (if any) they may have in the scrip, and shall be deemed to have sold the title and interest in respect of such shares to the company.

That notice to the effect of the foregoing resolution be inserted twice in the *London Gazette*, two London daily newspapers, *Mining Journal*, and two newspapers published and circulating in the county of Cornwall.

That the chairman and committee have the most cordial thanks of the meeting.

Dated, 58, Old Broad-street, April 24, 1834. W. C. FOULKES, Secy.

GREAT CRINNIS COPPER MINING COMPANY.—At the
FIRST GENERAL MEETING of the shareholders, held at the offices of
Austinfrasers, London, on Saturday, the 29th day of April, 1884, in pursuance of a
resolution passed at the meeting dated the 18th April,
JAMES COBBETT, Esq., in the chair,
The secretary having read the notice convening the meeting, together with the
company's rule bearing on the subject,
The Chairman proposed, and the meeting concurred in, that

That the rules, as entered in the cost-book, be received and adopted as the rules of this company, and that they be printed and circulated amongst the shareholders.

The secretary then read the report of the committee, and also a report from Mr. Webb, the agent of the mine, likewise a statement of the accounts for 16 months to the end of December, 1853, which will be found in another column.

Moved by Mr. Harrison, seconded by Mr. Shipton, and resolved:—
That Mr. Edward Wright and Mr. Robert M. Freeman be appointed the auditors of the company for the ensuing year.

Moved by Mr. Harrison, seconded by Mr. Wright, and resolved:—
That the thanks of this meeting be given to the gentlemen composing the committee of management, and the secretary, Mr. R. C. Manuel, for the manner in which they have discharged their duties up to the present time.

Resolved, — That a vote of thanks be given to the chairman, for his able and practical conduct in the chair on this occasion.

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THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
3129	Alfred Conso (copper), Phillack	£2 10s	230	1 1/2	£10 10s	10 10s
3000	Alfred Conso (copper), Phillack	£2 10s	230	1 1/2	£10 10s	10 10s
3000	Anglo-Saxon Coal Company	£2 10s	230	1 1/2	£10 10s	10 10s
1624	Balkeid (tin), St. Just	11 1/2	6 1/2	3	12 5 0	10 10s
3000	Bat Holes, Worthen, St. Just	17 1/2	3	3	10 10s	10 10s
4000	Bedford United (copper), Tavistock	2 1/2	8 1/2	3	3 11 0	10 10s
4000	Black Craig (lead), Kirkcubright	5	3	3	5 5 0	10 10s
124	Bowditch and Wheel Castle	5	3	3	5 5 0	10 10s
300	Botallack (tin, copper), St. Just	9 1/2	370	3	25 5 0	10 10s
1000	Bryntall, Llanidloes, Montgomeryshire	7	3	3	10 10s	10 10s
4000	Callington (lead, copper), Callington	7 1/2	17 1/2	2	22 10 0	10 10s
1000	Carn Brea (copper, tin), Illogan	15	88	3	0 10 0	10 10s
10000	Castle Slate Quarry, Dolwyddelan	1	1 1/2	1 1/2	30 0 0	10 10s
235	Conduff (copper), Gwynnapp, Cornwall	20	140	133	30 0 0	10 10s
236	Conduff (copper), Gwynnapp, Cornwall	20	140	133	30 0 0	10 10s
124	Devon Great Consols (copper), Tavistock	1	435	435 430	376 0 0	10 10s
12000	Dunroche (copper), Ireland	1	1	1	0 3 0	10 10s
673	Ding-Dong (tin), Gwul	3	3 1/2	2 1/2	35 0 0	10 10s
179	Dolcoath (copper, tin), Camborne	237 1/2	93	80 30	67 5 0	10 10s
2800	Drake Walls (tin, copper), Calstock	14 1/2	2	2	0 6 0	10 10s
300	East Darren (lead), Cardigan	28	90	3	235 0 0	10 10s
128	East Pool (tin, copper), Pool, Illogan	24 1/2	190	3	2245 0 0	10 10s
128	East Wheel Rose (silver-lead), Newlyn	50	140	3	0 5 0	10 10s
1024	East Wheel Margaret (tin, copper)	5 1/2	12 1/2	3	2 3 4	10 10s
1300	Eyam Mining Company, Derbyshire	3 1/2	30	3	390 10 0	10 10s
494	Fowey Consols (copper), Tywardreath	40	25	3	39 7 3	10 10s
2340	Foxdale, Isle of Man	74 10s 6d	15	15	0 16 0	10 10s
313	General Mining Co. for Ireland (cop., lead)	2 1/2	2 1/2	3 1/2	1 0 8	10 10s
870	Goninan (lead), Cardigan	2 1/2	13 1/2	3 1/2	22 0 0	10 10s
1024	Goninan (lead), Cardigan	2 1/2	13 1/2	3 1/2	0 7 0	10 10s
25000	Great Ousley Consols, Camelford	1 1/2	1 1/2	1 1/2	0 2 0	10 10s
13730	Great Polgoth (tin), St. Austell	3 1/2	1 1/2	1 1/2	0 10 0	10 10s
119	Great Work (tin), Gernoe	100	155	3	166 10 0	10 10s
1024	Herodford (lead), near Liskeard	8 1/2	3 1/2	3 1/2	2 12 0	10 10s
1000	Hingston Down Consols (copper), Calstock	3 1/2	14 1/2	13 1/2	25 0 0	10 10s
1000	Holmshush (lead, copper), Callington	23	3	3	3 5 0	10 10s
2000	Holyford (copper), near Tipperary	11	7	3	3 5 0	10 10s
76	Jamaica (lead), Mold, Flintshire	37 13s 6d	25	3	380 0 0	10 10s
20000	Kenmare and West of Ireland	1	1	1	0 1 0	10 10s
2048	Kennedy (copper), Breage	6s 7d	1 1/2	1 1/2	1 10 0	10 10s
786	Kirkcubright (lead), Kirkcubright	9	3	3	0 10 0	10 10s
20000	Lackamore (copper), Tipperary, Ireland	1	1	1	0 10 0	10 10s
20	Laxey Mining Company, Isle of Man	100	1300	3	0 2 0	10 10s
1600	Lewis (tin, copper), St. Erth	31 1/2	96	3	1038 0 0	10 10s
1800	Levant (copper, tin), St. Just	18 1/2	212 1/2	3	196 5 0	10 10s
400	Lisburne (lead), Cardigan	10s 6d	4	4	0 2 0	10 10s
6000	Marke Valley (copper), Cardigan	4 10s 6d	2 1/2	2 1/2	0 10 0	10 10s
8000	Mendip Hills (lead), Somerset	3 1/2	2 1/2	2 1/2	1 11 0	10 10s
20000	Merrilyn (lead), Flint	2 1/2	1 1/2	1 1/2	9 2 0	10 10s
20000	Mining Co. of Ireland (copper, lead, coal)	1	1 1/2	1 1/2	0 2 0	10 10s
15000	Nantlle Vale (lead), Llanfyllin	1	1 1/2	1 1/2	0 2 0	10 10s
470	Newtonvale Mining Company, Co. Down	50	70	3	33 0 0	10 10s
200	North Pool (copper, tin), Pool	23 1/2	190	185	308 0 0	10 10s
140	North Roakey (copper), Camborne	10	150	3	2 16 0	10 10s
6000	North Wheel Bassett (copper, tin), Illogan	10	10	10 12	23 6 0	10 10s
6400	Par Consols (copper), St. Blazey	1 1/2	9	9	10 10 0	10 10s
500	Peak United (lead), North Derbyshire	2 1/2	15 1/2	3	1 15 0	10 10s
100	Perran St. George (cop., tin), Perranrabbol	21 1/2	82	3	50 0 0	10 10s
200	Phoenix (copper, tin), Llanfyllin	30	750	3	3 5 0	10 10s
1000	Polybar (tin), St. Agnes	15	14	14	20 14 0	10 10s
560	Providence Mines (tin), Uny Lelant	20 1/2	2	2	0 8 0	10 10s
1948	Rix Hill (tin), Tavistock	1 1/2	2	2	0 22 0	10 10s
33200	Rorington (lead), Snaiblack, Shrewsbury	3	310	280 300	310 0 0	10 10s
256	South Caradon (copper), St. Cleer	2 1/2	310	280 300	1 7 0	10 10s
9000	South Tamar (silver-lead), Beerferry	11 1/2	6s 6d	3 1/2	69 0 0	10 10s
236	South Tamar (copper), Beerferry	11 1/2	6s 6d	3 1/2	242 5 0	10 10s
248	South Wheel Frances (copper), Illogan	37 1/2	230	3	8 8 0	10 10s
1024	Spearne Consols (tin), St. Just, Cornwall	1 1/2	2 1/2	2 1/2	1 17 0	10 10s
1024	St. Aubyn and Grylls (copper, tin), Breage	3	2 1/2	2 1/2	400 0 0	10 10s
94	St. Ives Consols (tin), St. Ives	80	180	3	12 10 0	10 10s
1000	Stray Park and Camborne Vein (copper)	10 1/2	10 1/2	3	4 11 0	10 10s
9600	Tamar Consols (silver-lead), Berran	4 1/2	2 1/2	2 1/2	6 18 0	10 10s
6000	Tincroft (copper, tin), near Pool, Illogan	7	2 1/2	2 1/2	6 13 0	10 10s
1024	Trethane (silver-lead), Menheniot	1 1/2	1 1/2	1 1/2	1 3 0	10 10s
5900	Treleigh Consols (copper), Redruth	11 1/2	30	3	1 15 0	10 10s
372	Trevelyan Consols (tin), St. Ives	32 1/2	330	3	480 15 0	10 10s
1000	Trevelyan (copper), Gwynnapp, Cornwall	32 1/2	330	3	402 80 0	10 10s
120	Trevelyan and Barriar (copper), Gwynnapp	130	49 1/2	3	305 10 0	10 10s
4096	Trevelyan (silver-lead), Menheniot, Cornwall	1	5	4 1/2	50 0 0	10 10s
100	Trumpet Consols (tin), near Helston	95	180	3	47 5 0	10 10s
400	United Mines (copper), Gwynnapp	40	180	3	2 2 0	10 10s
1024	Wellington (copper, tin), Perranrabbol	8 1/2	3	3	2 2 0	10 10s
236	West Caradon (copper), Liskeard	20	250	25 28	246 0 0	10 10s
1024	West Providence (tin), St. Erth	5	30	25 28	22 0 0	10 10s
1024	West Wheel Darlington	127 1/2	15 1/2	3	0 10 0	10 10s
1024	West Wheel Treasury (copper)	107 1/2	10 1/2	3	1 17 0	10 10s
1228	Wheel Arthur (copper), Calstock	70	70	29 30	520 0 0	10 10s
236	Wheel Bassett (copper), Illogan	15	15	3	481 5 0	10 10s
236	Wheel Buller (copper), Gwynnapp	4	15	3	3 13 0	10 10s
236	Wheel Buller (copper), Redruth	5	11 1/2	3	1 0 0	10 10s
236	Wheel Clifford (copper), Gwynnapp	100	100	3	3 13 0	10 10s
5136	Wheel Exmouth and Adams United	47 1/2	9 1/2	9	0 0 0	10 10s
100	Wheel Friendly (tin), St. Agnes	70	105	2 1/2	2367 10 0	10 10s
128	Wheel Friendship (copper), Devon	4	105	2 1/2	1 5 0	10 10s
5000	Wheel Golden (silver-lead), Perranrabbol	4	2 1/2	2 1/2	0 2 0	10 10s
6000	Wheel James (iron, copper), Roche	16 1/2	16 1/2	14	4 10 0	10 10s
312	Wheel Jane (silver-lead), Kea	23 1/2	85	3	26 0 0	10 10s
480	Wheel Love (tin), Endron	33 1/2	170	3	215 0 0	10 10s
112	Wheel Margaret (tin), Uny Lelant	79	170	3	215 0 0	10 10s
312	Wheel Mary Ann (lead), Menheniot	8 1/2	32 1/2	3	28 15 0	10 10s
80	Wheel Oriel, St. Just, Cornwall	70	520	3	185 10 0	10 10s
240	Wheel Reeth (tin), Uny Lelant	20 1/2	27	235	254 10 0	10 10s
198	Wheel Seton (tin, copper), Camborne	107 1/2	38	35 38	41 10 0	10 10s
320	Wheel Trevelyan (silver-lead), Liskeard	8 1/2	38	35 38	10 2 0	10 10s
1024	Wheel Trevelyan (tin, copper), Gwynnapp	9 1/2	38	35 38	23 6 0	10 10s
8000	Wicklow (copper), Wicklow	5	58 1/2	58 1/2	0 10 0	10 10s
15000	Wrygan (slate), Festing	1	1 1/2	1 1/2	0 10 0	10 10s

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5000	Alten Mining Company (copper), Norway	£14 1/2	3 1/2	3 1/2	4 5 0	15 0 0
72000	Baden, Grand Ducy of	1	5	4 1/2	34 17 6	10 10s
10000	Brazilian Imperia (gold), Brazil	2 1/2	5	4 1/2	140 0 0	10 10s
2484	Burra Burra (copper), South Australia	40	41	39 41	61 12 0	10 10s
12000	Cobre Copper Company (copper), Cuba	1	1	1	0 16 0	10 10s
100000	Colonial Gold	1	1	1	3 18 0	10 10s
10000	Copiapu Mining Company (copper), Chile	16	12	10 12	8 0 0	10 10s
20000	General Min. Assoc. (iron, coal), Nova Scotia	20	13	13	0 10 0	10 10s
10000	Linares (lead), Pozo Ancho, Spain	3	11	10 11	0 2 0	10 10s
103815	Marquita and San Granada	1	7	6 1/2	5 5 0	10 10s
26000	Mexican and South American (cop.), Mexico	9	7	6 1/2	0 8 0	10 10s
185710	North British Australasian	1	1	1	0 10 0	10 10s
32000	Obernhofer (lead), Nassau	13	4	3 1/2	33 4 0	10 10s
17000	Royal Santiago (copper), Cuba	1	1	1	0 12 0	10 10s
104000	Roy. Fernando (silver-lead), Linares	1	1	1	0 7 0	10 10s
11000	St. John del Rey (gold), Brazil	15	30 1/2	23 1/2	2 0 0	10 10s
43714	United Mexican (silver), Mexico	Av.	3 1/2	2 1/2	1 16 0	10 10s

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
75000	Adelaide Land and Gold Comp.	2	1 1/2	1 1/2	0 10 0	10 10s
35000	Almaden (silver-lead), Spain	2	1 1/2	1 1/2	0 10 0	10 10s
19000	Australian (cop.), S. Australia	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
6000	Barossa Range	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
75000	Brucutu (gold), Brazil	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
80000	Clarendon Consols, Jamaica	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
120000	Gladbach (zinc) Rhenish Pruss.	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
12000	Jamaica (copper)	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
2300	Kinzighal Min. Ass., Germany	4	1 1/2	1 1/2	0 10 0	10 10s
60000	Linares, New, (lead, cop.), Spain	1	1 1/2	1 1/2	0 10 0	10 10s

MINES WHICH HAVE SOLD ORES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
500	Albion (pyrolim and bleach clay)	6 1/2	6 1/2	6 1/2	0 10 0	10 10s
3000	Altamont (tin, cop.), Altamont	2 1/2	2 1/2	2 1/2	0 10 0	10 10s
4000	Augusta Cons. (cop.) Bridgetown	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
940	Bainoon Cons. (tin), Uny Lelant	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
4081	Balkeid (tin), St. Just	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
12000	Ballygoness (lead), Wicklow	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
21000	Bandon (barites), Cork	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
3000	Beacon (tin), Roche	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
504	Bell and Lanarth, Gwynnapp	7	12	4 1/2	0 10 0	10 10s
1000	Boiling Well (copper)	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
8000	Boston Consols (lead), St. Just	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
8000	Birch Tor and Vitrif., Lydford	5 1/2	5 1/2	5 1/2	0 10 0	10 10s
2000	Bishopscote United	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
4000	Ditto Glamorgan	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
20000	Bodmin United	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
144	Bodmin West Downs (tin, cop.)	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
120	Bollwall and Nanpan (tin)	2 1/2	1 1/2	1 1/2	0 10 0	10 10s
4096	Boringdon Consols, Plymouth	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
240	Boscan (tin), St. Just	1 1/2	1 1/2	1 1/2	0 10 0	10 10s
5400	Boston (tin), St. Just	1 1/2	1 1/2	1 1/2	0 10 0	